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## ORIGINAL ARTICLES

### Quinidin in Auricular Fibrillation with the Report of One Case of Sudden Collapse and Two Cases of Sudden Death\*

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During the years 1922 and 1923, we treated with quinidin sulphate twenty-five cases of auricular fibrillation on the Third Medical (New York University) Division at Bellevue Hospital. Late in 1921, when it was first decided to use quinidin in the treatment of auricular fibrillation, less than 400 cases so treated had been reported. From the various clinics where it had been used, there had been reported a resumption of normal rhythm in over 50% of the cases. Little was known as to which type of auricular fibrillation best responded to its use, although even at this date it was recognized that quinidin did not react in a similar manner with all types of auricular fibrillation, either as to the good effects which might be expected or to the toxic effects which might be feared. Our first nineteen cases were, therefore, necessarily unselected. As our fifteenth and nineteenth cases died after the administration of what was then the dosage accepted by the majority of workers—one after 1.8G. in one day and the other after 3.G. in seventy-six hours, but only 0.8G. in the fifty-two hours before untoward symptoms set in—and our seventeenth case showed severe toxic symptoms, we chose for our last six cases, cases of either paroxysmal auricular fibrillation, or patients with auricular fibrillation of very short duration, who seemed to have comparatively good heart muscles.

We had much more illuminating data on which to act in the matter of dosage. The reports from all clinics at that time carefully noted their manner of dosage. All workers agreed upon giving a preliminary test dose and many of them were giving two. Hewlett and Sweeney<sup>1</sup> had compiled a table of the published reports of dosage from ten clinics. In this table the maximum daily dosage was 3.G. (Jenny) and the minimum 0.8G. (Haas, H.). The average maximum daily dose was approximately 1.6G., but four of the ten gave a maximum dosage of 2.G. Hamburger<sup>2</sup> at this time, was giving 0.4G. t. i. d., a maximum daily dose of 1.2G. Hewlett and Sweeney<sup>1</sup>, themselves,

used a maximum dosage of 2.G. Oppenheimer and Mann<sup>3</sup> gave a maximum dose of 1.6G. daily. Wolfarth<sup>4</sup>, on the other hand, reported several patients in whose dosage he exceeded 2.G. daily and one patient to whom he had given 0.8G. five times a day (4.G. a day) for ten days, with no symptoms of toxicity other than tinnitus. From these reported observations, we decided to use a maximum daily dose of only 2.G., although twice that amount had been successfully used.

#### PROCEDURE

Patients on admission were given rest in bed, placed on a salt poor diet with fluids limited to 1,000cc. a day. Daily observations were made as to ventricular and pulse rates. Frequent notes were made as to progress of dyspnoea, orthopnoea, palpitation, pain, and any special symptoms arising. Weight was taken and recorded daily and a control electrocardiogram taken. Such patients as improved under this regime were not medicated (until they showed no further signs of improvement). Patients who showed no improvement after 72 hours rest were medicated, some receiving digitalis first and quinidin after the symptoms of heart failure had subsided, and others receiving quinidin at once.

#### METHOD

1. Preliminary test for idiosyncrasies. Test doses of 0.2G. were given the day before full dosage was instituted. 22 cases received two such doses two hours apart. 3 received only one test dose.
2. The next day 0.4G. was given every two hours until five doses had been given, unless the patient returned to normal rhythm or developed toxic symptoms before five doses had been given.
3. If the patient did not develop sinus rhythm or toxic symptoms, this dosage (0.4G. every two hours for five doses each day) was continued for a week and, in one case, nine days.

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4. During this period of quinidinization, frequent electrocardiograms were taken and clinical observations made and noted.

#### RESULTS

In Table I the cases are tabulated as to the type of auricular fibrillation, whether permanent or paroxysmal.

TABLE I

Type	No. of Cases	Number Developing Sinus Rhythm	Percentage Developing Sinus Rhythm
Persistent	22	14	63.6
Paroxysmal	3	3	100.
All Cases	25	17	68.

We had a rather higher percentage of returns to sinus rhythm than most other observers.

In Table II, the results are classified from the standpoint of the type of heart disease (grouped according to the classification of White and Myers<sup>8</sup>).

TABLE II

Type	No. of Cases	Number Developing Sinus Rhythm	Percentage Developing Sinus Rhythm
Rheumatic	12	5	41%
Syphilitic	2	2	100%
Arteriosclerotic	9	9	100%
Unknown	2	1	50%

These figures are similar to those reported by White.<sup>9</sup>

In Table III, cases of persistent auricular fibrillation are classified according to the duration of fibrillation at the time quinidin was given.

TABLE III

Duration of Fibrillation	No. of Cases	Number Returned Sinus Rhythm	Percentage Returned Sinus Rhythm
Over 2 years	5	3	60%
1 to 2 years	4	3	75%
6 mos. to 1 year	3	1	33%
Less than 6 mos.	9	6	66%

In many cases we were able to tell rather accurately the length of time the patients had been fibrillating, as most of them had been under observation at the Cardiac Clinic for a considerable time.

In Paul White's<sup>6</sup> reported cases, patients who had fibrillated less than six months showed a greater number returning to sinus rhythm than those who had had auricular fibrillation for a longer time. This was not the case in our small series.

The smallest amount given which caused a return to sinus rhythm was 0.4G. The largest dose given to any one patient was 16.2G. in nine days. The greatest amount on any one day was 2.0G.

The earliest return to sinus rhythm after the first dose of 0.4G. had been given was one and three quarter hours. This was in a patient with arterio-sclerotic heart disease who had been seen by us frequently for over a year and who, when seen, had always been fibrillating. The slowest return to sinus rhythm among the patients who did resume sinus rhythm was 17 hours after the first dose of 0.4G.

None of our cases of persistent auricular fibrillation were rationed. They have all resumed fibrillation. The shortest time that any case remained normal was 48 hours, the longest 32 days.

#### RESULTS IN PAROXYSMAL AURICULAR FIBRILLATION

Of the three cases of this type in our series, all returned to sinus rhythm within six hours. One retained normal rhythm for six days and then suddenly left for Canada and has not been heard from since. The second, a man of seventy, was having three or four attacks a week. After his return to normal rhythm, he was put on a daily ration of 0.2G. night and morning and has had only one attack in the past year. The third, a woman of seventy-four, was having, about once a week, severe attacks lasting several days. She, too, was put on a ration. She now has an attack on an average of once a month and has been able to cut these short by taking 0.4G. every two hours until the attack stops. She has never had to take over two of these doses.

Lewis and his associates<sup>7</sup> pointed out in 1921 that quinidine sulphate slowed the auricular rate. Lewis<sup>8</sup> and also Hart<sup>9</sup> show that digitalis increases the auricular rate, and Hart states "that this would appear to be further evidence that there is an antagonism between quinidin and digitalis." That there is such an antagonism is unquestionably true, but our patients who were fully digitalized when they received quinidin responded with a return to normal rhythm just as frequently as those cases who had not received digitalis.

#### TOXIC EFFECTS

In a recent article, Levy<sup>10</sup> has reviewed the literature and discussed at some length the clinical toxicology of quinidin. For the sake of comparison we have arranged our observations in the same grouping.

1. Unpleasant symptoms attending administration. In our 25 cases, 40% had unpleasant symptoms during the administration of the drug. As in Levy's series, more of our cases who did not return to sinus rhythm were so affected than those patients who did develop normal rhythm. In our series, however, it must be remembered that all our patients who developed normal rhythm did so with a total dosage of less than 3G., while those who did not react frequently received much larger amounts of the drug. The most frequent unpleasant

symptoms noted were tinnitus, giddiness, nausea and palpitation. One of our patients developed a temperature of 106 degrees Fahrenheit after taking 1.6G. in 8 hours. This was accompanied by an extremely rapid ventricular rate, 180 to 190. Another patient, usually most tractable and friendly, after 2.G. in ten hours, became morose and irritable and threw his sputum cup at a nurse when asked an ordinary question. The drug was stopped and the next day the patient's mental condition was normal. Three days later the drug was again given, but after the third dose of 0.4G. (given at two hour intervals) he again showed signs of irritability and the drug was stopped.

*2. Induction of Heart Failure.* This did not occur in any of our cases. Several of our patients developed rapid ventricular rates, but this seemed to give rise to no other symptom than palpitation and a feeling of praecordial discomfort.

*3. Sudden Collapse.* We had one such case and, as the number reported to date is small, (Frey<sup>10</sup> reports two—Haas,<sup>11</sup> one—Frey and Hagemann,<sup>12</sup> one) we are reporting it in some detail.

#### REPORT OF A CASE OF CARDIAC COLLAPSE

M. B. Age 38. Austrian, married, laborer. Admitted to Ward A6 Bellevue Hospital, March 1, 1922. Family history: No bearing on case. Previous history: Mumps in childhood. Severe bronchitis with brownish expectoration in 1916. Influenza during the 1918 epidemic: severe, lasted three weeks. Venereal denied, except that he gives a history of a suppuration in the left inguinal region in 1909. Weight, 180 in 1921. On admission: 145 pounds. Denied specifically rheumatism, chorea or tonsillitis.

Present illness. Three weeks before admission, after twelve years of a stormy family life, his wife deserted him. The next day he developed anorexia and frequency of micturition, which was followed for two weeks by alternating attacks of constipation and diarrhoea. During the periods of diarrhoea, his stools were frequently bloody. One week before admission, he first noticed shortness of breath and palpitation. These symptoms at first troubled him only when lying on his left side but became progressively worse, so that he was short of breath in whatever position assumed. Three days before admission he developed attacks of such severe pain over the praecordia, radiating into the left shoulder, that he cried out at frequent intervals. He also had a dragging pain in his right hypochondrium. Three days before admission, he also developed a profuse and constant, unemotional lachrymation which persisted until admission. The morning of the day that he came to the hospital he began to vomit and vomited all day.

Physical examination. On admission he showed dyspnoea, orthopnoea, veins of neck dilated and pulsating (ventricular type) and liver palpable and pulsating at the umbilicus. Signs of congestion at bases of both lungs. No oedema of the subcutaneous tissues or of free fluid in any of the serous cavities. Heart P. M. I. in the 6th space 13 cm. to the left of the median line. Second pulmonic sound louder than second aortic. Ventricular rate 179. Rhythm wholly irregular. No murmur. Pulse wholly irregular—rate 70. Blood pressure 118/78. The patient was placed in bed on a back rest, made comfortable with occasional sedatives, given cathartics, but no other medication for a period of nine days. His average ventricular rate dropped from 179 to 120 and his pulse rate rose from 70 to 114 during this time and he became much more comfortable. During this period the following examinations were made: Blood Chemistry N. P. N. 38; Creatinin 1.2; mg per 100cc of blood. Red Test 90% excreted in two hours. Urine, negative, except for a faint trace of albumin and a few hyaline casts. An electrocardiogram showed auricular fibrillation and a diphasic, initial ventricular complex in Lead I.

X-ray report. "Enlarged heart suggestive of double mitral disease."

On March 10th, nine days after admission, patient was digitalized, receiving digifoline by hypodermic, 9cc at 12 noon, 5cc at 6 p. m., 3cc at midnight, and 2cc at 9 a. m. March 11. Ventricular rate fell within 24 hours after the first dose to 68 and pulse deficit was obliterated. Patient showed marked clinical improvement. On March 17th, as the auricles were still fibrillating, it was decided to give quinidin, and at 2 and 4 p. m. test doses of 0.2G. quinidin sulphate each were given. These were followed by no untoward symptoms. The next day, March 18, quinidin sulphate was given as follows: 0.4G. at 4 a. m., 6 a. m., 8 a. m., 10 a. m. and at 12 noon. At 9 a. m., his ventricular rate was 130 with a deficit of 10 per minute. He said he felt no toxic effect from the drug at this time and an electrocardiogram showed only an increased ventricular rate. At 3:30 p. m., he complained of not feeling well. He was examined by one of us and it was found that his ventricular rate had fallen to 60 per minute but was still wholly irregular. While the observer was listening to the heart sounds, they suddenly ceased. The patient developed marked dyspnoea, the veins of his neck became engorged, he became livid and had several convulsive movements. After a period of about thirty seconds, the heart began to beat again, at first with slow irregular beats, then with short runs of tachycardia. Then it seemed to beat for a short time perfectly regularly, except for occasional premature contractions. The radial and pulse rates were at this

time 86 per minute. During the afternoon and evening he complained of dizziness. During the evening his condition was about the same. At 8 p. m., he was given a glass of milk and while drinking it, he gasped and fell over unconscious and pulseless. The nurse at once summoned a physician, but when he arrived the patient had regained consciousness and his condition was as before. He was seen at ten p. m. at which time his ventricular rate was 86 but the rhythm was wholly irregular and he complained at this time of a severe pounding headache. He passed an uneventful night. The next morning his ventricles were still irregular and the rate was 80. Between ten and eleven he had at intervals of a few minutes attacks of syncope similar to the others described. These stopped at eleven o'clock. During the rest of the day his only complaint was severe headache. His auricles continued to fibrillate. The next day he felt as he had before receiving quinidin. He was kept on daily digitalis medication and discharged a week later in excellent condition (Class 2a) with his auricles still fibrillating. Unfortunately it was impossible to get electrocardiograms during his seizures.

#### OCCURRENCE OF RHYTHMS INDICATING INTOXICATION OF THE HEART MUSCLE

Four of our patients developed ventricular premature contraction and one of the four had short attacks of ventricular paroxysmal tachycardia of 6 or 7 beats occurring frequently. Quinidin was at once discontinued and in a few hours all faulty rhythm disappeared. Quinidin was not resumed.

#### EMBOLISM

One patient with rheumatic heart disease, mitral disease with stenosis and insufficiency, and with only moderate symptoms of heart failure, twenty minutes after receiving his first test dose of 0.2G. of quinidin sulphate, developed a paralysis of his right arm and leg and an aphasia. He did not lose consciousness. His rhythm remained unchanged. The paralysis and aphasia have persisted to the present time. In all likelihood, quinidin was in no way responsible.

#### SUDDEN DEATH

We had two cases of sudden death. Both of these we are reporting. As autopsies were refused, the cause of death is in both cases problematical. It is important to note that both of the cases who died had no symptoms of heart failure when at rest at the time the drug was administered, and that both received test doses of the drug without manifesting any unpleasant symptoms. It is also noteworthy that both were cases of rheumatic heart disease, with mitral stenosis and insufficiency, with apices in the sixth space, well over to the left.

#### REPORT OF TWO CASES OF SUDDEN DEATH FOLLOWING QUINIDIN MEDICATION

**Case 1.** J. N. Age 20, single, white, English, a student. Rheumatic fever in 1907, history of hemiplegia four years later, 1911, affecting speech, right arm and leg which entirely cleared up in six months. He did not know that he had heart disease, nor did he have any symptoms of diminished cardiac reserve until two years ago, when he first noticed fatigue and dyspnoea on slight exertion. He came under our observation at that time and was admitted to Ward A6 Bellevue Hospital with signs of rheumatic heart disease, mitral stenosis and insufficiency, auricular fibrillation and heart failure of the congestive type. With rest in bed and digitalis, he improved, and in three weeks was discharged to the Burke Foundation, where after a stay of two weeks he returned to school. He attended the Cardiac Clinic fairly regularly until the fall of 1921. At this time he became irregular in his attendance to the clinic and stopped taking digitalis and in November, 1921, was readmitted to the hospital with symptoms of heart failure. He was digitalised and responded well. He was again sent to Burke where he did well temporarily, but his symptoms soon began to return, as he was receiving no digitalis medication. He was again readmitted to Ward A6, January 13, 1922. On admission he had moderate dyspnoea at rest, and some orthopnoea. The veins of the neck were not dilated, the liver was not palpable but there was some tenderness in the right hypochondrium. The lungs showed signs of congestion at both bases. No oedema of subcutaneous tissues. Heart. P. M. I. 6th interspace in anterior axillary line. A diastolic thrill is palpable over the apex. A diastolic murmur, rough, lasting through the last two-thirds of diastole was heard at the apex and the ensiform and transmitted to the left axilla. Cardiac dullness was increased to the right. The pulmonic second sound was accentuated. Ventricular sounds were wholly irregular. Rate on admission was 130 per minute. Pulse small, easily compressible, wholly irregular, rate 93. Blood pressure 135/100. Laboratory: Urine, Specific Gravity, 1020. Albumin, a trace. No casts. Otherwise, negative. Wassermann, negative. Electrocardiogram. Preponderance of hypertrophy of right ventricle. Diagnosis. Rheumatic heart disease, mitral disease with stenosis and insufficiency, auricular fibrillation, heart failure of the congestive type. Class III.

He was put to bed on a back rest. No medication was given. After ten days his ventricular rate had dropped from 130 to 86, pulse deficit became obliterated and signs of heart failure had disappeared. On January 23, test doses of 0.2G. each of quinidin sulphate were given at 3 and 5 p. m. No ill effects were noted. On January 24 he was given quinidin sulphate. The ac-

companying table shows the dosage and the ventricular and radial rates.

Time	Quinidin Sulphate	Ventricular Rate	Pulse Rate
9 a. m.	0.2G.	84	78
11 a. m.	0.4G.	105	75
1 p. m.	0.4G.	112	80
3 p. m.	0.4G.	120	85
5 p. m.	0.4G.	105	83

Late in the afternoon he complained of feeling somewhat dizzy and a little drowsy. He was seen at 8 p. m. and again at 11:30 p. m. Both of these times he said he felt fairly comfortable but had some dizziness. At 5:25 a. m. the next morning the nurse noticed that he was in distress. She went to his bed and found him unconscious, with shallow respirations. She was unable to get his pulse. She then called a member of the house staff, but when he arrived, the patient was dead. No autopsy was obtained.

**Case II. Age 44.** Single, stable hand, Russian. Family history no bearing on the case. Patient spoke little or no English. An intelligent previous history was unobtainable. He had been under our observation five times during the past two years. His diagnosis on previous admissions had been rheumatic heart disease, mitral disease with stenosis and insufficiency, auricular fibrillation, heart failure of the congestive type. Each time with rest in bed and digitalis he improved and was discharged. On each discharge he had been referred to the Cardiac Clinic but had never attended. Since discharge from the hospital three months previously, he had been working regularly as a stable man. After his last discharge, he took some digitalis irregularly until one month before admission. He had taken no medicine during the month previous. One week before admission he noticed that palpitation and breathlessness on exertion were returning. These have been growing progressively worse. Because of these symptoms, he applied for readmission to Ward A<sup>b</sup>, May 30, 1922. Physical examination on admission showed only slight dyspnoea when at rest and the patient was able to lie fairly flat in bed. Veins of neck not dilated, some congestion at bases of both lungs, liver not palpable, but slight tenderness in right hypochondrium. Moderate oedema of extremities. Heart P. M. I. Sixth interspace 15.5 cm. from midsternal line. Sounds at both base and apex of diminished intensity. Ventricular rhythm wholly irregular. Rate 112. Blowing systolic murmur at the apex transmitted to left, and a rough, rumbling, diastolic murmur at the apex localized. Pulse small, wholly irregular. Blood pressure systolic 125, diastolic 90, urine negative. Wassermann, negative. He was put to bed and in three days his dyspnoea and oedema had entirely disappeared. On June 4, 1922, he was given a single test dose of quinidin sulphate with no bad effect. Because of trouble with the galvanometer, quinidin

medication was not given the following day, but on June 6th the patient was given 0.4G. quinidin sulphate every two hours for five doses. His rhythm did not return to normal nor did he have any symptoms. The next two days quinidin medication was again omitted because of galvanometer trouble. On June 9, 1922, he was given quinidin sulphate 0.4G. at 8 a. m. and 10 a. m. When seen at 10 a. m., he was perfectly comfortable. The following notes made by one of us are taken directly from his chart. 11:05 a. m. Patient was found comatose and motionless and pupils pin points and fixed. Reflexes normal. No signs of paralysis. Respiration deep, violent, rate 6 per minute. Ventricle beating vigorously 100 times a minute, perfectly regular. Pulse full, good quality, regular, same rate as ventricles. 11:08 Ventricular beats and respirations became weaker. Atropine sulphate, grains 1/100 given subcutaneously. 11:18 Ventricular and pulse rates 64, regular. 11:22 Pupils still contracted, respirations regular. 11:27 Cheyne Stokes respiration set in with periods of opnoea lasting fifteen seconds. Pupils still contracted. Slight swallowing movements. 11:45 Patient moved left arm and tossed head. Pupils slightly less contracted. In response to supra-orbital pressure patient lifted his head and raised his shoulders. 11:50 Onset of deep regular breathing, 20 per minute. Several sudden contractions of abdominal muscles, and twitching of superficial muscles under the chin. 12:09 Ventricle and pulse rates, 60, regular. No evidence of any paralysis. All extremities respond by slight movements to local stimulation. 12:45 Patient still unconscious. Perspires freely. Vigorous heart beat regular. Regular and deep respirations. 12:50 pulse and ventricular rate 144, perfectly regular. During afternoon the patient maintained this regular but rapid ventricular action. Though unconscious, his condition seemed good. At times he would move his extremities. 11:00 P. M. It was noted that his heart, which had been rapid but regular, had become irregular. 12:00 Midnight, Condition unchanged, heart still irregular. His fundi were examined at this time, no abnormalities were seen. Coma lasted throughout the night and he died at 5 a. m., without regaining consciousness. His temperature rose to 102.8 two hours before death.

Besides the atropine as mentioned above, the patient was given Caffein Sodium Benzoate, Grains 5, every three hours, and just before death, Adrenaline Chloride Sol, 1 in 1000 minims, 10 every half hour for three doses.

#### SUMMARY OF FATAL CASES

A young man of twenty, without heart failure, with rheumatic heart disease, mitral disease with stenosis and regurgitation and a large heart, having received 2.4G. quinidin sulphate in 26 hours with no toxic symptoms, suddenly

twelve hours after last dose and six hours after last observed by a physician, (at which time the auricles were still fibrillating) died.

A man of 44, with rheumatic heart disease, mitral disease with stenosis and regurgitation and a large heart, having received 2.2G. quinidin sulphate in 24 hours and then none for 48 hours and then .8G in 4 hours, one hour after the last dose suddenly became comatose, with marked slowing of respiration and return of normal heart rhythm. There seemed to be no paralysis. After nine minutes the patient had Cheyne Stokes respiration for a short time. This later became normal. Heart rhythm, which was normal after onset of coma, became very rapid but still regular in about two hours. This rhythm continued for 12 hours when auricles again began to fibrillate. He died at 5 a. m., without regaining consciousness.

Autopsy was refused on both cases. We do not feel that we know the mechanism of death in either case.

#### CONCLUSIONS

1. Of twenty-six unselected cases of auricular fibrillation, 68% developed sinus rhythm after receiving quinidin sulphate.

2. In certain cases of paroxysmal auricular fibrillation, patients may be kept free from attacks for long periods of time by a daily ration of quinidin.

3. That a test dose of 0.2 Grams of quinidin sulphate repeated in two hours is followed by no symptoms of toxicity, is no indication that the patient may not become toxic with larger doses of the drug.

4. One case of sudden collapse and two cases of sudden death following the use of quinidin sulphate are reported.

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#### Chronic Peptic Ulcer

BY JOHN B. DEAVER, M. D.

AGAIN we are considering that very fruitful source of discussion in medicine and surgery—peptic ulcer. Formerly the term peptic ulcer was supposed to refer to ulcer of the stomach only, but today this term includes ulcers occurring in any portion of the alimentary canal in which hydrochloric acid is normally present, comprising gastric, duodenal, gastro-jejunal or marginal, and jejunal ulcer. Diversity of opinion as to the origin and pathogenesis of peptic ulcer is as rife today as it was in the early history of this clinical entity. Theories as to its origin are almost as numerous as the investigators occupied with its study. Nevertheless, from the vast amount of literature on the subject there emerge a few outstanding facts, which are at this time considered as more or less standardized.

First and foremost it is being more and more recognized that not one but several factors are concerned in the etiology of the ulcer and that of the lesion in the stomach and duodenum, the former is the more serious due to the greater un-

certainty of diagnosis, its greater tendency to carcinomatous changes and the more complex surgery required for its radical treatment.

As to pathogenesis. Early writers laid great stress on circulatory disturbances as the main factors. Virchow, I believe, was the first to offer this explanation by calling attention to embolic occlusion of one of the gastric arteries which resulted in an area of degeneration. This theory was later controverted by various writers who showed that the free anastomoses of the gastric artery was such as to preclude the possibility of an embolus sufficient to cause enough local anemia to produce ulceration or erosion. The role of the arterial circulation being thus questioned it was only natural that the possibility of some defect in the venous circulation should be suspected as the starting point of the lesion. The most prominent advocate of this theory was Rokitansky. Stasis from venous thrombosis favors intestinal hemorrhage, affects the mucosa and submucosa, and thus produces an area of minor resistance on which the ulceration develops. With the continued investigations, experimental and clinical, there finally

arose the theory of infection and of alteration of the gastric secretion as the primary factors in producing the ulcerated areas. While these latter are the ones most acceptable today, there is no doubt that Virchow's original theory of some circulatory disturbance is still applicable to many cases.

The theory of infection, as is well known, has been elaborated and convincingly demonstrated by the researches of Rosenow. Clinical experience has been indicating during the past few years that in a very large number of cases of peptic ulcer, particularly gastric and duodenal ulcer, the original focus of infection lies in the appendix. Moynihan was one of the first to call attention to the relationship existing between appendicitis and gastric lesions. I have always held this view, and the more I see of chronic appendicitis and chronic peptic ulcer, the latter so often associated with a chronically diseased appendix, the stronger do I become in my conviction. Furthermore, the investigations of Rosenow as to the elective affinity of streptococci are an additional confirmation of the theory of the infectious origin of peptic ulcer.

As to the gastric chemistry, it is pretty well acknowledged that some change in the chemistry of the stomach and ulcer go hand in hand, the change usually consisting of a hyperchlorhydria. I say usually, because I am well aware that not all cases of peptic ulcer are associated with hyperacidity, but the relationship between the two is sufficiently frequent to be more than incidental. Whether the hypersecretion, when present, produces the ulcer, or the ulcer the hypersecretion is still a matter of argument. While the consensus of opinion seems to be that hyperacidity is first present, it nevertheless would seem that the ulceration once formed without doubt maintains the hypersecretion, thus creating a vicious circle with its attendant clinical symptoms and pathological manifestations. In other words, hyperacidity prepares the way for the action of whatever secondary factors, usually of an infectious or toxic nature, may be at work in the pathogenesis of chronic peptic ulcer.

As long as the questions of pathogenesis and etiology remain unsolved, we cannot, of course, expect to be able to provide against the development of the acute lesion on which the chronic ulceration is based. And it is because of this fact that the matter of diagnosis assumes such vast importance. For it is only with early diagnosis and prompt treatment that we can hope to forestall the remote and sometimes very serious sequelae of long-standing chronic peptic ulcer. Fortunately, the diagnosis enjoys a much more concerted opinion than the origin of the ulcer, due to the fact that the large clinical material at our disposal has enabled us to develop a rather constant clinical picture, oftentimes con-

firmed by roentgen-ray study and laboratory tests. The outstanding symptom, of course, is the pain occurring at rather regular intervals after meals, usually of a burning, gnawing, sticking or colicky character, always located in the epigastrium, and sometimes radiating to either side and extending through to the back and very often relieved by food or alkali. This time-relation and food-relation may help to indicate the probable site of the lesion, that is, whether in the stomach or the duodenum. It has been tersely expressed by Moynihan as, "food, comfort, pain, comfort, equals gastric ulcer; while food, comfort, pain, equals duodenal ulcer, the former showing a quadruple and the latter a triple rhythm."

A rather interesting scheme of the diagnostic value of pain as far as location of the ulcer is concerned has been elaborated by Paul Cohnheim. Ulcer at the cardia end of the stomach is usually associated with severe pain on swallowing, especially when the food is coarse, and on swallowing alcoholic drinks, also pain in the epigastrium of a burning paroxysmal character and extending through to the back. When the pain is of a gnawing, burning or sticking nature located in the epigastrium and the back, occurring within an hour after eating, the site of the is most likely on the lesser curvature while an ulcer at the fundus usually produces little or no pain and is therefore more difficult to diagnose clinically, except perhaps on a history of occult blood or bleeding. The pyloric ulcer usually causes severe pain in the epigastrium extending through to the back occurring from one to two hours after meals and sometimes relieved by vomiting or sour eructations. Finally, a duodenal ulcer produces a burning, gnawing, usually cramp-like pain in the epigastrium more to the right, extending to the back, occurring three or four hours after eating, very often at night, and relieved by food or alkali.

The experienced diagnostician, of course, knows that all manner of variations from these outlines occur, and that their value is more suggestive than anything else. Another very characteristic feature of typical peptic ulcer, no doubt, is the periodicity of attacks, which almost regularly occur in the spring or the fall, rarely in the summer months, and the prolonged history extending over a number of years. The well-being between attacks is likewise another feature of value particularly in the differentiation from other upper abdominal disease, especially cholecystitis. Roentgen-ray examination is useful when it demonstrates the presence of the ulcer, but as I have often said, a negative roentgen-ray is not reliable. I think there are others who agree with me in this.

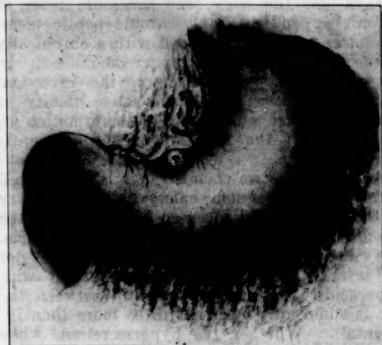
Formerly when duodenal ulcer was not so well known, gastric ulcer was considered a rather common disease easy to diagnose. But today we know that the clinical diagnosis of duo-

denal ulcer is much less difficult than that of gastric ulcer. The chief symptoms of gastric ulcer are pain, hematemesis, and vomiting. In duodenal ulcer, while vomiting of blood may occasionally occur, there is a greater likelihood of the blood appearing in the stool. Hyperchlorhydria, on the other hand, is less frequent in the gastric ulcer than in the duodenal lesion, although hyperchlorhydria is also associated with other conditions, such as cholecystitis, appendicitis, etc. There are in fact only two methods of making a positive diagnosis of gastric ulcer. One by x-ray demonstration of the ulcer and the other by inspection and touch. An ulcer that cannot be demonstrated at operation by sight and touch is *not* an ulcer. In order to bring this home more forcibly to my internes, I place the excised ulcer in the palm of their hands, and let them feel the indurated edges as well as see the crater of the ulcer. They thus get the best idea of the rationale of operation and the fallacy of supposing that medical treatment can bring about a permanent cure of such an ulcer.

However, I am sure you have not asked me to come here to discuss the diagnosis of peptic ulcer, but rather its treatment. First, a word as to the medical treatment of these interesting entities. While it may be true that there is at the present time a better understanding between the internist and the surgeon as to the cases requiring medical and those requiring surgical attention, respectively, nevertheless as a surgeon I cannot help gaining the impression that in most cases surgery has been too long delayed. This may be a direct result of the numerous reports of medical cures and the increasing favor this palliative treatment is finding among doctors and patients alike. And it is only natural, for the one as little wishes to advise, as the other cares to undergo, an operation, unless it is absolutely necessary. But as a result I am not seeing less extensive but more extensive pathology as time goes on. It is when confronted with the cases that have been under medical treatment for some time and finally reach the surgeon at an advanced stage that my suspicion is aroused that the large number of reported cures are either based on incorrect diagnoses or that recovery is more apparent than real. Of course, I refer to the chronic ulcer. Even if cicatrization of such an ulcer does take place, there usually remains some persistent pathology as the result of the repeated inflammatory processes, in the shape of cicatricial stenosis, particularly in ulcer close to the pylorus, and which will have to be corrected by surgery.

Surgeons of experience in the operative treatment of chronic peptic ulcer will, I think, agree with me that medical treatment does not bring about healing of a chronic ulcer. While it is true that abrasions or erosions can heal under medical treatment, I doubt whether it is possi-

ble to make an absolute diagnosis of erosion or abrasion except by inspection of the gastric mucosa, since the x-ray is scarcely as reliable in this as in a well developed ulcer. At operation abrasions or erosions cannot be felt while true ulcers can. It is, of course, easy to make the diagnosis of chronic ulcer on the basis of a typical ulcer history, but in the atypical case, in the absence of positive x-ray findings, it is not so easy. This fact agrees with the palpable fact, already pointed out, of the ever-increasing number of cases coming to operation with prolonged histories of digestive disturbances suggestive of ulcer and repeated attempts at medical cures. Irrespective of the chronic ulcer patients coming under the surgeon's care, we



Ulcer lesser curvature.

are operating on many cases of acute perforation giving the history of having been treated for chronic gastritis, gastric catarrh, etc., and also many cases of carcinoma engrafted upon ulcer. This to my mind answers the question does medical treatment cure chronic ulcer. If the original diagnosis in these cases was that of ulcer then I am correct in my premises; if the original diagnosis was not ulcer, the recorded diagnosis being chronic gastritis, dyspepsia of some form or other, then again my premises would stand. Fortunately, the surgeon's diagnosis is proven or disproven by biopsy. The surgeon, on the other hand, often makes a diagnosis of carcinoma and at operation finds a large indurated benign ulcer, or, as in two recent personal experiences, a diagnosis of chronic calculous cholecystitis is made and operation reveals both ulcer and gallstones. In both these instances there was a subacute perforation of the ulcer covered by the adherent gall bladder; in both the gall bladder symptoms were the most prominent and corresponded well with the physical findings. It has also been my experience to operate for acute abdominal symptoms and to find not only an acute suppurative

appendicitis and acute empyema of the gall bladder, but also, on separating the adhesions between the gall bladder and the duodenum, to expose a perforated duodenal ulcer. Such and similar instances serve to strengthen my stand on this question of surgery versus medicine in the treatment of apparently serious and more or less prolonged upper abdominal symptoms. Medical treatment may, and no doubt does, give relief, but this does not mean that the ulcer has healed or that relief is permanent, nor does it prevent hemorrhage, perforation or cancer implantation.

An unhealed ulcer is an irritant therefore a fertile cause of carcinoma. In the experience of the Mayo clinic cancer is found on an ulcer base in about fifty-three per cent of cancers excised, and in the experience of the Lankenau Clinic, in about thirty per cent. The internist, I dare say, does not keep this possibility in mind when insisting upon prolonged medical treatment for chronic ulcer. Duodenal ulcer is not so prone to cancerous change, but on the other hand, presents perforation in twenty to forty per cent of cases, in ten per cent of cases hemorrhage.

The medical cure of ulcer is not so easy to check up by a follow-up system as is the surgical treatment. We surgeons hear much of the operated ulcer patients who have recurrent symptoms, which the surgeons admit occur in fifteen per cent of cases; but the medical man does not say anything of the fifteen to twenty per cent of cases that have been treated medically and then perforate after supposed medical cures; nor of the ten per cent that bleed, nor of the thirty to fifty per cent that develop cancer.

The inherent possibilities of chronic ulcer which are of immediate danger to life are, as you well know, acute perforation, hemorrhage and sub-acute perforation, in the order named. While I cannot enter into detailed discussion of these conditions, I simply wish to say, although acute perforation is the most serious of the three, if seen early, before there is extensive peritonitis, it is easily recognized and if operated on at once the prognosis is very good. Subacute perforation, on the other hand, is neither so formidable nor so easily diagnosed. It is often confused with other right upper abdominal diseases, especially cholecystitis. But close questioning will usually lead to an opinion and the physical examination will often confirm it.

Hemorrhage is a very serious condition and oftentimes rapidly fatal. The diagnosis is made on the history, the physical examination, especially pallor and prostration; and the exclusion of other causes such as enlarged spleen, cirrhosis of the liver, etc. The hemorrhage which occurs as the first symptom of ulcer is usually due to an abrasion or erosion, Dieulafoy's ulcer. But the history of repeated less severe hemorrhage occurring at irregular inter-

vals is especially characteristic of chronic ulcer. I will now show some lantern slides of ulcers I have operated which I am sure will impress you with the pathology of the condition and I hope convince and convert you to my way of thinking. I will give a very short synopsis of the history of each patient from whom the ulcer was removed, as I show the ulcer on the screen.

There is no rule of thumb for the surgical treatment of peptic ulcer; much depends on the condition of the patient, the character and the location of the ulcer.

For small non-adherent gastric ulcer upon the lesser curvature, or upon either the anterior or the posterior wall not far distant to the pylorus, the usual location of gastric ulcer, excision or cautery perforation with closure usually suffices.



Subtotal gastrectomy, anterior short loop, gastro-enterostomy.

For small non-adherent ulcer on the posterior wall excision and closure through an anterior gastrotomy wound is the operation of choice. In ulcer with widespread induration of the lesser curvature on the anterior or the posterior wall, subtotal gastrectomy is the preferable procedure, while for ulcer with widespread induration near the pylorus, pylorectomy is the operation of choice.

For saddleback ulcer with or without hour-glass deformity sleeve resection alone is done. I no longer make a gastro-jejunum-anastomosis to either pouch, as recommended by some surgeons, except where sleeve resection is not feasible for anatomical reasons. When the ulcer is large with wide induration, I choose a subtotal gastrectomy either with closure of the proximal end of the stomach and a posterior gastroenterostomy or anastomosis of the (open end of the) stomach to the jejunum not far from the duodeno-jejunal junction, bringing the jejunum up over the great omentum and trans-

verse colon, as practiced by Moynihan. I have done this operation a number of times with very good results. This no-loop method I am inclined to regard a more favorable procedure than the long jejunal loop operation, where the jejunum is either brought up over the great omentum and transverse colon, the Balfour-Polya operation, or through an opening in the transverse mesocolon, the Polya operation. The long loop operation may be followed by vicious vomiting unless an entero-enterostomy at the base of the loop and the descending limb of the jejunum is made at the same time as the stomach anastomosis.

Ulcer of the posterior wall of the stomach adherent to the pancreas is best handled by expos-

Ulcers located at the cardia, if operated early can be excised, but if operated late, when the area of induration is extensive, little in the way of radical surgery or even ameliorative surgery can be done except complete removal of the stomach which is, as you know, a formidable as well as an uncertain procedure.

For small duodenal ulcer of the anterior or the antero-lateral wall I practice excision or perforation with cautery (Balfour operation) and closure of the perforation. For the large ulcer of the anterior or antero-lateral wall, as well as for small or large ulcer of the posterior wall, I do either a posterior gastroenterostomy alone or I amputate the duodenum, below the site of the induration, remove the pylorus and follow with a posterior gastroenterostomy.

For a large ulcer of the anterior or antero-lateral wall of the duodenum low down, in close proximity to the head of the pancreas, and for an ulcer obstructing the terminal duodenum, I do a posterior gastroenterostomy alone. While the latter location of ulcerative obstruction of the duodenum is rare, I have comparatively recently operated two patients for this condition.

The treatment of gastro-jejunal or marginal ulcer is influenced by the presence or absence of a patulous pylorus. When the pylorus is occluded or has been removed, as in a pyloreotomy or a subtotal gastrectomy, excision of the gastroenterostomy opening, anastomosis of the proximal and distal ends of the jejunum and a new gastroenterostomy or a Roux-Y operation is the procedure. When there is a gastro-jejuno-colic fistula complicating the marginal ulcer, if the opening in the colon cannot be closed by simple suture, resection of the affected part of the colon will be necessary. Incidentally, I may remark that I have recently operated a case of marginal ulcer with a gastro-jejuno-colic fistula in which the fistulous opening in the colon was so large that the stomach emptied directly into the colon, causing an uncontrollable diarrhoea.

When the pylorus is present and is patulous, simple excision of the gastroenterostomy, closure of the opening in the stomach and union of the proximal and distal limbs of the jejunum is all that is necessary.

In jejunal ulcer, if small, excision of the ulcer or cauterization and closure of the opening in the bowel is sufficient, while if the ulcer is large with rather wide induration, resection is required.

The Billroth operation I do not practice, nor do I make a gastro-duodenostomy. The operation practiced by Finsterer in both duodenal and gastric ulcer, whether the ulcer is small or large, consisting of removal of the greater part of the stomach, I regard as too much surgery and not entirely physiological. Finsterer's theory is that by taking away the secreting part of the stomach the chances of recurrence are



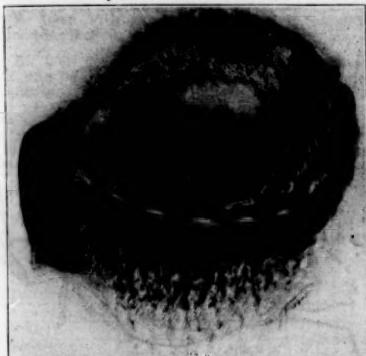
Incision into lesser peritoneal cavity by dividing the anterior two layers of the gastro-colic omentum from the transverse colon (inter-colo-epiploic route).

ing the ulcer by way of the inter-colo-epiploic route, unless there is a gastropexis, when the route through the lesser peritoneal cavity, entering the cavity by way of the anterior layer of the lesser omentum, may be chosen. After the ulcer has been excised, the opening in the stomach closed, and the pancreatic wound (made in dissecting free the ulcer) charred with the cautery, it is well to follow the suggestion of William Mayo to bring up the free portion of the great omentum and tuck a portion of it between the stomach wound and the pancreas at the site where the ulcer was attached.

When there is practically complete obstruction of the pylorus due to ulcerative induration, posterior gastroenterostomy will suffice. The surgeon with much experience in stomach surgery may elect to do a plastic operation; but the former procedure, other things being equal, is the safer. For acquired pyloric stenosis in the presence of a movable pylorus or one that can be safely mobilized the Finney pyloroplasty is a splendid operation.

practically eliminated. The fact that an extensive operation can be done with a very small mortality does not necessarily mean the best operative procedure.

In operating for ulcer such abdominal foci of infection as a diseased gall bladder, or a diseased appendix, &c. should be looked for and if possible treated at the same time as the ulcer.



Lesser peritoneal cavity opened; pancreas, posterior wall of the stomach exposed; stomach and great omentum having been turned upward and backward.

It is understood that all possible sources of extra-abdominal foci of infection will have been investigated by the medical man who previously was in charge of the case, yet the surgeon should satisfy himself of this by very careful examination.

The elimination of foci of infection and making as few gastroenterostomies as possible must appeal to the surgeon who does many operations. Gastroenterostomies have their sequelae and radical operations also, so that in the interests both of the patient and the surgeon the simplest procedure is the most satisfactory, provided, of course, it complies with the fundamental requirements—the removal as far as possible of existing pathology with a fair chance of restoration of function and of health.

The surgical treatment of chronic ulcer we admit does not claim 100 per cent cures. It cannot do so as long as we are confronted with any one of the causes of recurrence after operation such as, failure to remove foci of infection; faulty mechanics; not removing the ulcer which later becomes activated, the fresh activity being precipitated by an acute infection elsewhere; the formation of a new ulcer or ulcers, including marginal ulcer, adhesions and faulty after-care. We admit that the ulcer is a septic field and capable of contaminating other parts. For example, its excretion mixing with the secretions of the stomach may be a factor in the etiology of gastro-jejunal or marginal or a jejunal ulcer.

But if it is admitted that a disturbance of the gastric secretion and of the gastric motility are the predominating features of the ulcer then the rationale of operation becomes evident, inasmuch as with the excision of the ulcer or its exclusion from the effects of the gastric juice, the restoration to a normal or an increased evacuation time of the stomach contents is established.

Recurrence of symptoms, I believe, is in many instances to a great extent due to lack of proper post-operative care. In the first flush of gratitreatment has its greatest field of usefulness, and the restrictions of diet, the patient is apt to overtax his digestion—which has been impaired for so long. It is after operation that medical



Ulcer dissected out.

treatment has its greatest field of usefulness. Post-operative restriction of diet should be kept up according to individual requirements, particularly with reference to the extent of the pathology found at operation and the pre-operative duration of symptoms. It is here that the close co-operation of the internist with the surgeon should be active.

#### THE PREVALENCE OF CANCER

THE statistics of the Department of Health of the City of New York show that not less than 6,000 people die yearly of cancer in the city. There must be not less than 15,000 people suffering from cancer at any one time. One of every ten women who reach the age of forty, and one of every fourteen men of the same age contract the disease. The liability of each middle-aged person to develop cancer is so great that it is important for everyone to be on the lookout for it.—*Bulletin N. Y. Department of Health.*

**Prolapsus of the Bowel Through a Patent Omphalo-Mesenteric Duct Opening on the Side of the Umbilical Cord. Report of a Case with Operation\***

GEORGE DAVID CUTLER, M. D., BOSTON, MASS.

We can all recall the warnings given by our teachers in obstetrics, not to ligate the umbilical cord too closely to the abdominal wall. We were told that the reason for this was because occasionally embryonic structures might be included in the ligature with disastrous results.

In the ordinary course of events such accidents seldom occur on account of the infrequency of encountering these malformations. To enumerate the possibilities, we may encounter remains of the allantois or remains of the omphalo-mesenteric duct. If the allantois persists communication may exist with the bladder by way of the urachus. After the cord has separated there may develop a simple granuloma or if the yolk sac persists, there may be a mucous polyp communicating with the intestine by way of a Meckel's diverticulum. Prolapse may occur through such an opening.

It is also possible to have hernia into the umbilical cord itself and in more marked cases, where there is faulty closure of the ventral plates, there may be extensive defect in the abdominal wall with evagination. I have operated successfully on one patient, twenty-four hours old, with hernia into the umbilical cord. In this region we also encounter the common umbilical hernia of infancy.

The interesting condition which I wish to report is exceedingly rare and represents a prolapse of the bowel through a patent omphalo-mesenteric duct opening on the side of the umbilical cord.

In a fairly comprehensive search through the literature, I am unable to find any reference subsequent to that obtained from Cullen's Book, "The Umbilicus and Its Diseases." He states, that the case recorded by Gibbs is the only example known to him in which prolapsus of the bowel occurred in the side of the cord during the first few hours of life.

In Guthrie's case the omphalo-mesenteric duct opened on the side of the cord but prolapsus did not occur until several weeks after the cord came away.

Under the heading, "Unique Congenital Malformations Associated with Umbilical Hernia, and a Pendulous Artificial Anus," Gibbs reports a rather unusual condition noted a few hours after the child's birth. The upper part of the cord had dilated from an umbilical hernia containing intestine. Attached to the side of the sac was a blood-red body with villous surfaces, looking like intestinal mucous membrane. Meconium passed from both ends of this body. From the anus feces passed on the third day. At autopsy the large bowel was

found diminished in size. Gibbs thought the mass was a portion of the cecum and ileum.

Fig. I presents the appearances typical of prolapse or inversion of the small bowel through

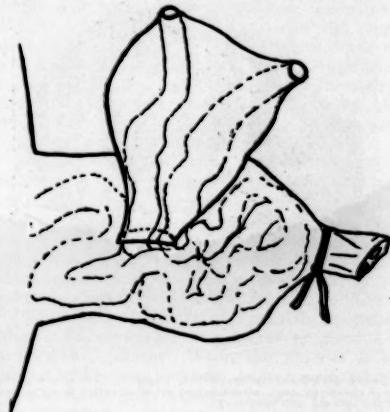


Figure 1.

the patent omphalo-mesenteric duct in association with an umbilical hernia.

Fig. II presents the prolapse reduced and line AB shows where the Meckel's diverticulum was excised and opening closed.

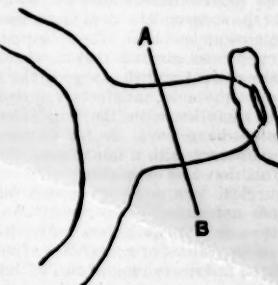


Figure 11.

I wish to express my thanks to the Staff of the Lying-In Hospital for referring this patient to me.

**CASE HISTORY:**—Baby C., four hours old was seen by me in consultation at the Boston Lying In Hospital shortly after birth and condition diagnosed as

\*From the Surgical Service, Children's Hospital.

Prolapse of Meckel's Diverticulum Opening on Side of Umbilical Cord. Permission for operation was obtained and patient transferred to the Children's Hospital. The following notes are taken from the Children's Hospital record No. 62529:—(August 24/23.)

F. H. Father and mother living and well. No children dead.

P. H. Full term baby, born at the Boston Lying In Hospital, mid-forceps delivery.

P. I. Born with abnormal condition in umbilical region described in P. E.

P. E. Well developed and nourished baby. Sterile gauze and binder about umbilicus. Forceps bruises on both sides of head. Negative except for local.

LOCAL EXAMINATION:—Mass about size of an egg protruding through the side of the cord with mucous membrane surface with two openings at corners. Coils of the small bowel can be seen in cord.

#### OPERATION AUGUST 24, 1923:—

Cord and abdominal wall prepared with boric acid solution and alcohol. It was impossible to

of the cord was incised; then the prolapse was easily reduced. The adherent portion of the diverticulum was resected between clamps and the hole in that part attached to intestine was closed with Connell stitch of catgut reinforced by a continuous silk stitch to the serosa. The umbilical ring had to be incised to permit replacement within abdominal cavity of the portion of the intestine and Meckel's diverticulum which had never been within the abdomen. Reduction accomplished, the cord was trimmed off. Vessels, which did not bleed, were tied. The peritoneum and fascia were sutured. The skin edges approximated. Sponge count correct. The patient stood the operation well. Ether was given forty-five minutes and patient was returned to the ward in good condition.

#### *Reduction Prolapse of Intestine through Meckel's Diverticulum Opening in Side of Cord. Closure Artificial Anus. Radical Cure of Hernia into Umbilical Cord.*

AUGUST 30, 1923—NOTE:—Following operation there was no rise in temperature. There has been very little vomiting. Bowels move well and he is voiding urine normally. He is taking one and one-half ounces of breast milk every four hours.

SEPTEMBER 2, 1923—NOTE:—For the past few days the baby has been doing very well. Takes feedings well and is gaining weight. Stitches were removed and the wound is in fair condition. Discharged to day.

LABORATORY NOTES:—Urine 8/28/23 Cldy yellow acid alb—0 sugar 0 acetone 0. Urine 8/31/23 Clear normal acid alb—0 sugar 0 acetone 0.

SUBSEQUENT HISTORY:—Developed facial erysipelas and broncho pneumonia and died. Autopsy findings:—Abdominal condition healed and functioning normally.

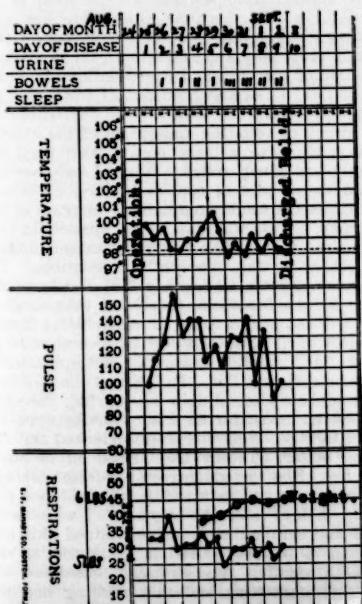
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Holt. The Diseases of Infancy and Childhood, D. Appleton and Company, New York and London, 1914, p. 110.  
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#### MENTAL TESTS IN COLLEGES

According to a statement from Dr. R. W. Husband, director of Personnel Research of Dartmouth College, made before the recent meeting of the Association of American Colleges, intelligence tests are here to stay. One hundred fifteen colleges and institutions were reported as utilizing some sort of test, which represents 42.2 per cent of the membership in the Association.

Only 2.6 per cent reported the use of such tests as unsatisfactory. The weight of the evidence on the basis of a survey shows that the standard tests do predict to a remarkable degree the interest of students in their work and their success in pursuing their studies. Many of the schools where intelligence and alertness tests have proved most valuable are devising scales for personal estimates as a basis for student advice and direction after graduation.—*The Nation's Health*.



reduce the prolapsed Meckel's diverticulum and intestine through the ring at the side of the cord so an incision was made into the sac formed by dilated cord. Then the loops of the small intestine were pushed back into the abdomen except for the two portions which entered the Meckel's diverticulum. The ring in the side

**Postinfantile Tetany. Report of a Case Associated with Chronic Pyloric Obstruction**

BY ROBERT W. BELKNAP, DAMARISCOTTA, MAINE

The following case is reported not because of any brilliant therapeutic result, but because of the comparative rarity of the condition and the importance of prompt recognition and treatment.

Tetany is usually regarded as a disturbance of calcium metabolism or as an alkalosis, since it occurs in hypo-parathyroid states or in conditions in which there has been a loss of acid by vomiting or from the administration of an excess of alkali therapeutically. It also can be produced from voluntary or hysterical hypopnoea, presumably from the "washing out" of carbon dioxide. Greenwald (Ref. 1) has attacked the alkalosis theory claiming that the real cause of the tetany is not the OH ion per se but the coincident increase of sodium ion, and speaks of a "sodium poisoning." In a system as delicate as the regulatory mechanism of the acid-base equilibrium it is difficult to evaluate the factor that might be the ultimate cause of the tetanic reaction since it involves such questions as state of circulatory and respiratory systems, production of urea, renal function stability of hemoglobin, in fact practically every defense mechanism of the body for the maintenance of blood neutrality. As Henderson says (Ref. 2) in speaking of this regulatory mechanism "anything may be either cause or effect." For clinical purposes in the light of present knowledge it seems proper to regard tetany as due in some way to a relative alkalosis or deficiency of available calcium. In fact it is not at all unlikely that there exists an important reciprocal relation between the two and that both factors may operate simultaneously, the concentration of OH' to depress that of Ca' or vice versa.

**Case 1—Mary B. Age 45, M. 7 Ch.**

P. H. 2 years ago she underwent cholecystectomy for gall stones. The Gall bladder was packed full of fine stones. For about a year she has been rather nervous which fact she attributes to the menopause. Show has been scanty and irregular.

P. I. Ever since operation digestion has been delicate. For a few months she has had occasional distress after eating with sense of epigastric fullness and has been constipated. She has lost appetite and moderately in weight. Yesterday she drove 150 miles by automobile over rough roads. She vomited several times on the way and had sense of fullness of abdomen. She complained of prickling of hands and feet and of cramps in fingers. Today the vomiting has continued and fingers have felt cramped. She feels very tired. She was seen Nov. 17, 1923.

P. E. Fairly well developed and nourished woman lying on couch. Face markedly flushed and hot. She makes movements of fingers but says that they are stiff. They tend to flex and there is resistance to passive extension. Heart sounds of fair quality, occasional extra systoles, B-P 130. Abdomen slightly distended and tympanitic. No masses or spasm.

On account of its association with vomiting tetany was thought of as the explanation of the paraesthesiae and spasm of fingers. She was given laxatives and Hydrochloric acid dilute 2 Mil after meals, and was advised to rest. Small frequent meals of soft solids was advised. The tetany disappeared entirely by next day and in three days she felt and looked much better. She had retained food with the exception of regurgitation of some food immediately after meals two or three times. Bowels had moved freely. The regurgitation she did not mention to me until later. At this time while there was some evidence of organic obstruction it seemed that spasm must play a considerable part in the production of symptoms. I heard nothing from her until Dec. 1. I had been out of town and another physician had seen her the day before for an attack of vomiting and spasms of the extremities. He gave a large enema with good gas result and much relief. When I saw her her hands were held in typical position of tetany. At times she would complain of increase of the "cramp." It was distinctly spasmodic. At times she was able to voluntary extend fingers, at others it was apparently irresistible. The epigastrum was moderately full and tympanitic. I introduced the fractional tube and aspirated not over a pint of nearly clear liquid, washed until clear and left in several mils. of dilute HCl. Relief was great, and epigastrum became soft and flat. Facies was pinched and eyes sunken. Rectal drip was started. She had passed no urine for 24 hrs. Corsets were applied tightly. Next morning she looked and felt much better. Tetany had passed off in about 1½ hrs. She was given rectal glucose with calcium lactate and retained much fluid per rectum. 2 days later she was started with macaroni and scraped beef. She retained this and seemed to improve. Abdomen stayed flat and soft. Operation was strongly considered but she was improving and the vomiting had not recurred. On Dec. 7 she vomited once material containing beef eaten 24 hrs. previously. I determined to send her to the hospital 20 miles away in the morning. The next morning there was a marked change in her appearance. Eyes were sunken and she was somewhat disoriented and irrational. Epigastrum was distended and gastric succussion was heard. There was no evidence of tetany. I aspirated about a quart of

blackish material from the stomach washing with HCl. I gave her 300 Mils 15% glucose intravenously. She seemed much improved and more comfortable and soon became rational. No more material was obtained by aspiration. She was taken at once to hospital and operation at 3:00 P. M. disclosed firm adhesions of pylorus to under surface of both lobes of the liver. Gastroenterostomy was done. Stomach was only slightly dilated.

She was in fair condition after operation and next day condition seemed reasonably good but she lost ground and in spite of intravenous glucose and salt solution failed to secrete any urine. Vomiting did not recur nor was there any return of the tetany.

She died 48 hours after operation.

#### COMMENT

Possibly an error was committed in not urgenting operation after the first attack of dilatation, however her condition appeared very poor at the time and she was steadily improving later. I was unprepared for the sudden change Dec. 8.

This case is instructive as illustrating the rapid fulmination of the condition at the onset of dilatation and the urgent indication for restoration of body fluids and HCl.

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- 1 Greenwald, I.: Jour. Biol. Chem., 54:285 (Oct) 1922.  
2 Henderson, L. J.: Oxford Medicine, Vol. 1, p. 311. (Oxford University Press, 1920.)

#### BOOK REVIEWS

*Hemorrhoids, Their Etiology, Prophylaxis and Treatment by Means of Injections.* By ARTHUR S. MORLEY, F. R. C. S. Eng. 114 pages, frontispiece and 9 illustrations. Oxford University Press, American Branch, New York, 1923. Price \$2.00.

This monograph is a complete and fair, though possibly slightly over-enthusiastic, statement of the case for the injection versus the operative treatment of internal hemorrhoids. In his first chapters the author gives a good description of the anatomy and etiology of the varieties of hemorrhoids and of their differentiation, which is none too familiar to the average practitioner. The injection method, which is applicable only to internal hemorrhoids, originated in the hands of quacks in America, and for that reason fell into unjustifiable disrepute. The method has very definite therapeutic value, and has now been placed on a sound scientific basis by legitimate proctologists. It was introduced much later into England, and, from the author's statement and advocacy of it, is evidently gaining in popularity there. He gives valid arguments for the advantages of such non-operative treatment in suitable cases, and gives an excel-

lent description of the technique. Until recently the basis of all fluids used in such treatment has always been phenol, of which he uses a 20% solution, which is considerably stronger than the percentage usually employed; and he does not (evidently from lack of sufficient personal experience) recognize the value of the alternative solution of 5 to 10% quinine and urea, which originated with Terrell, of Richmond, Va., and is now quite generally used by proctologists in this country. The appendix gives a series of illustrative cases showing his satisfactory results; and the volume is a profitable one to be read and be instructed by, with some reservation as to the employment of the method in the treatment of the more severe types of prolapsing internal hemorrhoids.

*Operative Surgery. Covering The Operative Technic involved in the operations of general and special surgery.* Volume 3 by WARREN STONE BICKHAM, M. D., F. A. C. S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York, Former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six octavo volumes totaling approximately 5400 pages, with 6378 illustrations, mostly original and separate Desk Index Volume. Volume 3 containing 1001 pages with 1249 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by subscription only. Index Volume Free. W. B. Saunders Company, Philadelphia and London.

This third volume of Bickham's most excellent work deals with operations upon the eyes and their accessory structures, the ears and their adjacent structures, the nose, air sinuses of the head, cheeks, lips, teeth, hard and soft palates, tongue, salivary glands and their ducts, larynx, trachea, thyroid and thymus gland, the remains of the thyroid glossal duct, remains of the bronchial clefts, cervical and supernumerary ribs, carotid body, and other operations upon the neck, the breast, thoracic wall, pleura, lungs and mediastina.

This volume, as those preceding it, is beautifully illustrated with most unusual and beautiful drawings. This is one of the most valuable features of this excellent work. The only region of the body in which the illustrations are not entirely satisfactory are those of the technic of thyroidectomy. The text, however, is entirely adequate and the chapter on thyroid surgery is absolutely up-to-date.

The illustrations include not only operative technic but a considerable amount of valuable anatomy, description of various postures essential in certain special operations, and useful instruments.

This volume forms a most valuable addition to those which have already appeared.

Case Records  
of the  
**Massachusetts General Hospital**

**ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN  
WEEKLY CLINICO-PATHOLOGICAL EXERCISES**

EDITED BY  
RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.  
F. M. PAINTER, ASSISTANT EDITOR

CASE 10191

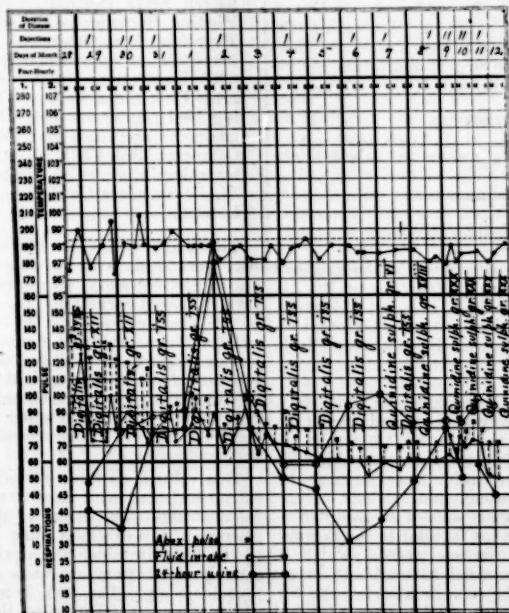
An Irish-American policeman of thirty-four was referred from the Out-Patient Department May 28 with a questioned diagnosis of thyrotoxicosis.

F. H. Good,

P. H. He had occasional sore throat until he had his tonsils removed four years before ad-

had infrequent sprees. He smoked in moderation. His usual weight was 225 pounds, his present weight 220.

P. I. Thirteen days before admission without warning he was seized with abdominal pain beginning near the umbilicus and radiating around to the sides, so severe that he would have liked to double up and yell. He was very short of breath. He sat down and rested, and almost at once was free from pain, but felt very tired. Since that time his symptoms had progressed steadily. Whenever he exerted himself he had palpitation, dyspnea, the pain, and a feeling of weakness in the knees. Sometimes he wheezed a little. After a few days one flight of stairs was all he could do. At night he felt exhausted, but could not sleep. In bed he was dyspneic, but in a chair was more comfortable. His bowels did not move for two days after the onset. He took laxatives every day, making them move ten to twelve times daily with some tenesmus. The pain in the abdomen was not affected by



mission. Eight weeks ago he was ill for two weeks with "acute indigestion"—"lump in the epigastricum," much gas, severe epigastric pain relieved by food for two or three hours, usually occurring at 11 a. m. and 3 p. m. He sometimes urinated once at night.

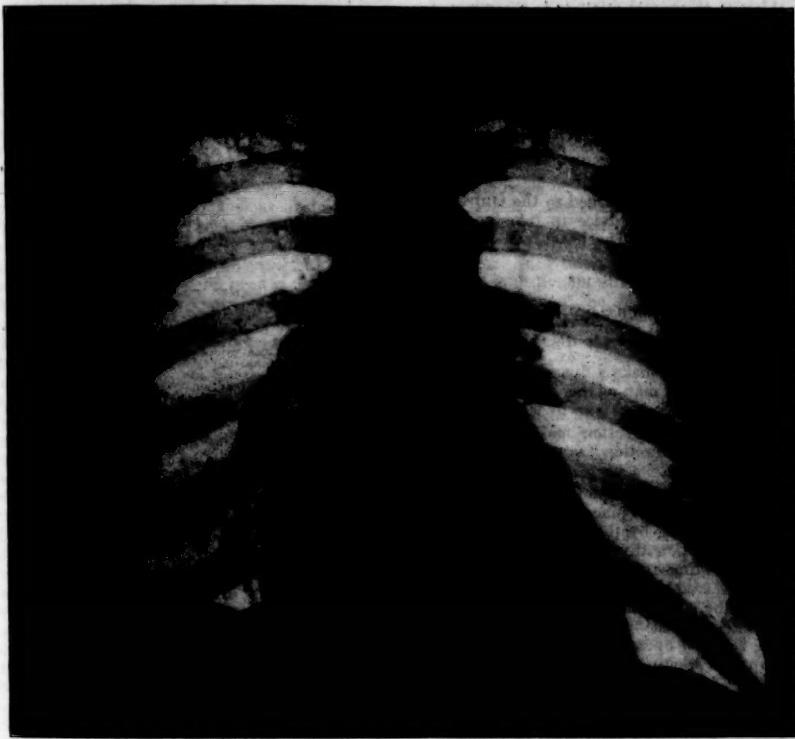
*Habits.* He occasionally took whiskey and

food, coughing, or anything else except exertion. His hands had trembled. His head had perspired much at night. May 22 he stopped work.

P. E. A well nourished man of fine physique. Palms and feet rather moist and warm. No real exophthalmos or palpable thyroid.

Slight cyanosis of the lips and fingers. *Lungs* clear in front. Sticky râles at the right apex posteriorly. Apex impulse of the heart 1-2 cm. outside the nipple line in the fifth and sixth spaces. Beat irregular in rate and intensity. Moderate radial deficit. Sounds of poor quality.  $P_2$  greater than  $A_2$ . Systolic and diastolic or

blood corpuscles at two, no albumin or sugar. *Blood.* Hgb. 80%, leucocytes 12,600-8,900, polymorphs 62.9%, reds normal, platelets large and increased. *Wassermann* negative. *Non-protein nitrogen* 41.7 mgm. *Basal metabolism* 0. Average pulse 50. *X-ray.* See illustration. In the oblique view the posterior mediastinal space



Heart shadow very much enlarged in all diameters; greatest increase in the region of the auricles. No increase in the aortic shadow. Enlarged heart. Dilatation of the aorta. Measurements unsatisfactory. Both lung fields show considerably decreased radiability, probably of cardiac origin.

presystolic murmurs all over precordia, best heard at the apex and the pulmonary area. Pulse very poor. B. P. 115/80? *Electrocardiogram.* Auricular fibrillation. Rate 100. Slurring R.  
Intraventricular block? Flat T.  
*Abdomen* tense. Some fluid. Liver enlarged and slightly tender. *Genitals* normal. *Extremities.* Slight tremor of the hands. Slight pitting edema of the ankles. *Pupils* normal. *Reflexes.* Knee-jerks equal on reinforcement. *Rectal examination.* External hemorrhoids.

T. and P. as shown in the chart. R. 29-19. Urine. 3 31-180, sp. gr. 1.012-1.020, leucocytes at four of five examinations, rare to occasional red

was obliterated in the lower part. Pulsations visible in the ventricles and absent in the region of the auricles.

*Orders.* May 28. Digifolin ampules iii s.c. Digitalis gr. iii t.i.d. for two days. Morphia gr. 1/6 s.c., repeat in three hours if not asleep. May 30. Veronal gr. x with sodium bromide gr. xx by mouth at bedtime. May 31. Digitalis gr. iss once daily. June 2. Sodium bromide gr. xx, repeat once if necessary. (Not given.) June 2 and 3. Phenacetin gr. v, repeat in one hour if necessary. June 7. Quinidine sulphate gr. iii at 3:30 and 5:30. June 8. Quinidine gr. vi

every two hours for five doses for four days. June 13. Digitalis gr. iss daily.

June 4 the patient felt much better. June 5 Dr. Paul D. White reported in consultation, "Auricular fibrillation with ventricular rate now well controlled by digitalis. Cause of cardiac disability? Chronic tonsillitis and fact that at this age rheumatic etiology is a common factor make it likely that this man has rheumatic heart disease. I cannot hear any diastolic murmurs. The case does not resemble hyperthyroid heart. Suitable case for quinidine."

There was no reaction to two test doses of quinidine June 7. The patient's wife testified that he went on sprees for two or three days quite often and felt very unwell after each one of these.

June 15 he was discharged to the Out-Patient Cardiac Clinic with advice to take no alcohol for a year at least. The heart was still fibrillating.

#### DISCUSSION

BY DR. RICHARD C. CABOT

#### NOTES ON THE HISTORY

One hesitates to make a diagnosis of thyrotoxicosis in healthy man of this age. It is natural therefore that they sent him in with a question.

This type of indigestion makes us think of spasm, or hypersecretion as we used to call it, or of ulcer.

There are three strands of interest in this history. (1) In the first place the one suggested at the very beginning by the fact that he was sent in with a question thyrotoxicosis, which we do not get anything to back up until we see the note about trembling hands and perspiration. (2) Then the occurrence of some gastric trouble is suggested by the pain at eleven and three o'clock, relieved by food. (3) There is a series of symptoms seeming on the whole more important which suggest cardiac trouble and which in an older man one would think of as suggestive of coronary block and coronary infarction, but which as we go on seem more like the symptoms of any poorly compensated heart trouble. Under this heading come dyspnea, weakness, dizziness, cough, and possibly the pain. The pain might be digestive rather than circulatory. So we look to the physical examination to straighten us out in this case where from the history alone we should certainly have been unable to do anything.

#### NOTES ON THE PHYSICAL EXAMINATION

"Palms and feet rather moist and warm" gives us again a suggestion of thyrotoxicosis.

I am well out of my depth with a "slurring R<sub>2</sub>." Dr. White, will you explain this?

DR. PAUL DUDLEY WHITE: Normally the Q-R-S, as this is called, (we no longer speak of the Q, R and S waves separately,) should be a

sharp narrow deflection. It is the first ventricular complex in the electrocardiogram. Often the Q is absent. The total width of the Q-R-S should be one-tenth of a second or less from the beginning of the Q to the end of the S. Slurring to the up-stroke or down-stroke of the R should be mentioned, for it is often evidence of abnormality, being usually significant of intraventricular block, that is, a block below the bundle of His, a block in some of the branches of the aiculo-ventricular conduction system.

DR. CABOT: What does slurring look like?

DR. WHITE: Normally in children there is a Q wave present. (See diagram.) The first wave of the electrocardiogram is the P wave, and in a child we should have a little down-stroke next, the Q, then the R, then a slight S, then a T. That makes one heart beat. The P the Germans used to call the "A," meaning the auricular wave; the Q they called "I," and the T was "F," the final ventricular wave.

Typical normal electrocardiogram of a young child. (Lead II.) In the adult the record is very similar except that the Q is usually absent, and the R is well marked. Notching or slurring of the Q-R-S wave in Lead II is abnormal if at all marked. But they have now adopted the letters in general use in England, France and America, P Q R S T. This is Einthoven's nomenclature.

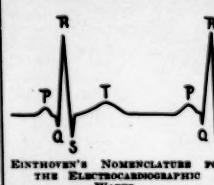
DR. CABOT: Have Q and S come into use more recently?

DR. WHITE: No; they were always used. This group of letters was taken from the middle of the alphabet in order not to select letters that meant too much. Einthoven did not know at the time just what the deflections meant. Now we know that the P represents the impulse spreading over the auricle, the Q-R-S the spread down to the ventricle at the very onset. The Q is usually absent in the adult, so that we have the R and S, and we speak of this wave as the Q-R-S wave. If there is a slurring or thickening or change of direction on the up-stroke or down-stroke so that it is widened somewhat we speak of slurring. It may increase the width of the Q-R-S wave a good deal. Sometimes there is a lesser degree of it and it occurs only on the down-stroke. Slurring is significant sometimes of abnormal conduction in the conduction system below the bundle itself; one branch or the other may be partially blocked. Normally we should have a sharp Q-R-S.

DR. CABOT: Who invented the term "slurring"?

I do not think anybody would ever get what you have drawn here from the word. I should say it is more like "notching."

DR. WHITE: It is not always notching. There may be a slight bend with a thickening. Unless it is marked, however, we cannot say that it is definitely intraventricular block.



EINTHOVEN'S NOMENCLATURE FOR THE ELECTROCARDIOGRAPHIC WAVES.

DR. CABOT: There has been some suggestion of that block from the character of the pain he had in the beginning.

The chart shows essentially a normal temperature, a trifle subnormal, but not importantly so. The pulse also shows nothing remarkable. The trend is downward, at first 90 to 105 most of the time, then between 50 and 80, with 60 perhaps the commonest record. The amount of pulse deficit is shown by the stars, the rate at the apex being 130, the rate at the wrist 70. Of course this is what we ought to chart as the real heart beat; we now see that his heart was really going from 110 to 130 for the first four days, and did not get to 90 until the end of the first week. After that there continues to be a deficit, though of not very high rate.

The twenty-four-hour urine was fairly normal at the beginning; later it went up to a very high point, presumably under digitalis. He got digitalis from the beginning in pretty good doses, doses which transformed into the tincture would make our fathers' or grandfathers' hair stand on end. How much of the tincture is twelve grains?

DR. WHITE: The tincture is one-tenth the strength of the leaf itself, so that twelve grains of the leaf would be about 120 minimis, two drams, of the tincture.

DR. CABOT: It was after he had been getting those doses that he got this very satisfactory diuresis, his fluid intake going with it and his pulse deficit being much diminished.

There is nothing to make us suspect the kidney, I should say.

Why the platelets are increased I have no idea. There is nothing in the rest of the blood to make us expect that. We should ordinarily see that increase with leucocytosis or with leukemia.

I do not know how much stress one ought to put on this X-ray report of the heart. I do not know how often the X-ray people expect to see that absence of auricular motion in fibrillation.

DR. WHITE: That is likely to occur in auricular fibrillation. In one of the patients recently operated on by Dr. Cutler very close attention was paid to the muscular action of the ventricles and auricles. The heart was exposed, and although the auricles were mainly at a standstill, occasionally there was a very slight movement of the right auricular appendage. Otherwise the auricles seemed to be absolutely standing still in this patient whose electrocardiogram showed auricular fibrillation.

DR. CABOT: Then, since there has been a note of auricular fibrillation before, this X-ray picture is what we should expect. At the time Dr. White listened there was only a systolic murmur, which makes it very much harder to say anything about valve disease under those conditions.

Although there was some tremor and some warmth and sweating of the hands there did

not seem to be enough about the case to persuade Dr. White to put it in the thyroid group.

#### DIFFERENTIAL DIAGNOSIS

I do not know whether we are going to have actual proof of what this man had. Certainly with the facts before us I could make no diagnosis. We have a man whose heart is doing very poor work, who has some hints of a rheumatic etiology, but not very much, (he has had some tonsillitis,) the course of whose trouble is pretty short, only thirteen days. It is unusual, I should say, for a man with a rheumatic heart to experience his downfall as quickly and suddenly as this. He is rather young for the degenerative type of heart troubles. We have no suspicion of syphilis. And as we have heard, Dr. White thought there was no good evidence of hyperthyroidism, the most important point there being the normal basal metabolism. We do not make a diagnosis of that disease unless we have or have had a high metabolism. So I think we can say the hyperthyroidism question is out of it. We have no reason to consider the hypertensive type, I should say. We have no good evidence of syphilis. We have some slight evidence of the rheumatic type.

Then there is the question of what alcohol can do to a heart. I am certain I have never seen alcohol by itself do this. If it can do this it is news to me.

We have no reason to suspect here a heart secondary to nephritis, or a congenital type of heart. We had in the beginning some suspicions of myocardial damage, and I know of no way in which that can be ruled out. We can almost never satisfactorily rule myocarditis either in or out, and therefore when we are in difficulties, as we are here, it is always a thing which has to be considered and cannot be excluded. I certainly cannot exclude it here.

So it seems to me to come down to a rheumatic type of heart trouble, with or without chronic adhesive pericarditis, and a suggestion of myocardial damage which we cannot possibly confirm or refute. And if I had been asked to give an opinion on the basis of this record, this is as much as I could have said. I should like to know what more than that at the time you felt covered by this record, Dr. White.

DR. WHITE: It is very difficult to decide on the etiology, as you suggest. One important fact however I got on careful questioning and have confirmed since, that is, that his "sprees" were very important events in his disability. The attack of fibrillation which started at the time of and was responsible for his symptoms I feel quite convinced followed a night in which he had smoked and drunk a good deal and had been up very late playing cards. He had had very little sleep. He suddenly felt his heart beginning to show trouble after one of these nights. I think his fibrillation resulted directly from that,—a toxic effect. I doubt whether he

has very much heart disease.

DR. CABOT: I am trying to get at what you would have said at the time.

DR. WHITE: At the time that seemed to be the exciting factor.

DR. CABOT: I have already said that I have never seen alcohol do this. One of the facts it is difficult to hitch up with alcohol is the size of the heart. The physical examination said it was big, and if I am not mistaken the X-ray record said it was big.

DR. WHITE: On the X-ray plate it measures 8.7 cm. one way, 5.9 cm. the other, that is, a total of 14.6 cm. The internal chest diameter is 29.5 cm. That is within normal limits. We consider the heart size normal when the transverse diameter by X-ray is less than one-half the internal of the chest. He was a very big man, over six feet tall.

DR. CABOT: Did you find the apex in the sixth space?

DR. WHITE: No, in the fifth.

DR. CABOT: Of course, if one can exclude enlargement of the heart one is better able to say this can all be due to some toxic influence like alcohol.

DR. WHITE: There is often difficulty in determining heart size when the heart is fibrillating—the apex impulse is likely to be diffuse. Also the auricular fibrillation interferes with the X-ray examination.

DR. CABOT: Is there anything further to say about the relation of cardiac diameter to total chest diameter, Dr. Holmes? I had supposed, and I think you have said here, that if the heart was up to half the chest diameter that was in itself enlargement.

DR. HOLMES: That is practically what we feel. Of course this is a rough measurement, and where it comes pretty close I should be guided by clinical findings. But still this particular heart does look a little large to me.

DR. CABOT: I think if there were any way of settling this thing I should like to make a bet that it was enlarged.

DR. WHITE: It was at the beginning no doubt. The X-ray examination showed it smaller later.

DR. WILLIAM D. SMITH: I should like to ask Dr. White if the toxic theory would explain the intraventricular block.

DR. WHITE: There is too slight evidence to be sure it ever existed.

DR. CABOT: Will you tell us the subsequent events, Dr. White? I will say I should not have believed certainly from the facts here that this was due to alcohol. If it was I should be wrong.

DR. WHITE: The last time I saw this man was on February 29, 1924, when he was in excellent condition, working actively every day as a policeman. His blood pressure was 130/80, his pulse rate 84 and regular.

There was a slight systolic murmur at the

apex, no diastolic murmurs anywhere. He looked well, lay flat easily, and felt better than he had for years. He seemed to be a perfectly normal person. All this followed a reaction to quinidine sulphate which he actually took as an ambulatory patient. His reaction to quinidine in the ward was not satisfactory. On the 7th of the month he took two test doses of three grains each and failed to show any toxic symptoms. The next day he took 18 grains, and for the next four days 30 grains a day, which is the usual amount when one is attempting to restore normal rhythm, in divided doses of six grains each. We stopped the quinidine after six days. Generally if normal rhythm is restored by quinidine the response comes on about the second or third day. Very rarely does one have a favorable response after six days. This result was disappointing. We resumed digitalis and referred him to the Out-Patient Department.

In the Out-Patient Department I found he was crippled; he could not carry on his work properly. He was at a desk job and was much bothered by palpitation. We felt we ought to try to do something more for him. On digitalis his rate stayed down and he was fairly able to get along. We decided to try quinidine again while he was an ambulatory patient. He reported every day to the laboratory while taking it and we took electrocardiograms of him. This was last August. He left the ward in June. We failed to get any result after two grams of quinidine a day for a week. We then ran the dose up to three grams a day, which is much more than the average dose. One has been advised not to give quinidine in such doses, and anyway not to give it to ambulatory patients. We have given quinidine since then to ambulatory patients. I think the danger is much exaggerated. For two days there was no response. Then we decided to try one more day at four grams. During that day on which he was taking four grams his heart rhythm returned to normal and has stayed normal since.

That return to normal rhythm was a most important event in his treatment. It allowed his return to normal living; his palpitation stopped; he was sent back on his beat, normally active. He is very much pleased with his treatment here and comes frequently to report himself. He has cut out his sprees,—alcohol, tobacco and late hours.

I do not think the alcohol was necessarily responsible, though it is well known that some of the alcoholic drinks now available are more toxic than those of preprohibition days. In a man who seemed otherwise normal, fibrillation following a night of alcohol, smoking and gambling makes one feel that the combination was very probably responsible. Cases have been reported of toxic effects which did produce fibrillation, generally paroxysmal. His fibrillation persisted. The bigger the heart the more likely it is to persist, and perhaps the original size of

the heart had something to do with the persistent fibrillation in this case.

He is taking rations of quinidine, six grains of quinidine a day for six months, then after his last visit three grains a day for a month or two. I advised him last month to stop quinidine altogether, and it is likely that since he is no longer going through the strain of gambling, late hours, etc., his change of habits may be sufficient to prevent the recurrence of fibrillation. We can tell only by observation.

It is a very interesting case, and a very important one with respect to therapy by quinidine sulphate. I have a few other patients who have been similarly benefited. I shall collect them later on and make a report showing that quinidine has its place in medicine and can be given frequently. Some people have an unreasonable dread of the drug; but after seeing a few cases like this we feel that it is one of the most valuable drugs in the treatment of heart disease, coming next to digitalis.

DR. CABOT: What is your prognosis from this point on?

DR. WHITE: I think he will do well, for years anyway.

DR. CABOT: That is, you do not believe that there is any organic, any anatomical damage in the heart to speak of?

DR. WHITE: I don't know. I think the chances are against it. The last X-ray I thought was in accord with the physical examination and did not show any enlargement. We must remember that he is a very large man.

DR. WILLIAM D. SMITH: I should like to ask Dr. White if he feels safe enough on the quinidine question to advise people who are doing work outside to give their ambulatory fibrillating cases who have not been fibrillating very long—say weeks or months—to start such ambulatory cases on quinidine to see what happens? Or does he think these cases should be in the hospital?

DR. WHITE: No, I think not. We give it more to out-patients than to ward cases. We give it to prevent paroxysms. We test it out, because every now and then there is somebody who is sensitive. I mean generally sensitive. The heart can stand a lot of quinidine. The only dangers from the use of quinidine are in a sensitive person where one may produce respiratory paralysis—a very rare event—and in patients who have had congestive failure recent or old, in which there is a danger of thrombosis in the auricle from which there may be embolism. Those cases are not very frequent. About one-third of all cases of permanent fibrillation and nearly all cases of paroxysmal auricular fibrillation should be treated with quinidine even as ambulatory cases.

DR. SMITH: Would the duration of fibrillation have something to do with it?

DR. WHITE: I should think anybody who has had fibrillation for over a year would be, not a poor risk, but unlikely to show a return to nor-

mal rhythm, although we have had some of five or ten years' duration who did return to normal rhythm.

DR. CABOT: Looking back now should you say that if you had given these big doses at the beginning you would have got your result sooner?

DR. WHITE: Yes; but of course we do not know positively.

DR. CABOT: To me it is a very instructive case. I have never seen anything like it.

#### CLINICAL DIAGNOSIS

Auricular fibrillation.

#### CASE 10192

A colored American of forty-seven entered January 7 complaining of loss of weight for a year. The history was not considered reliable. The patient's mental reaction was not quite made out.

F. H. His mother died of a "paralytic stroke."

P. H. He had measles, whooping cough and frequent earaches as a child. At sixteen he had gonorrhea, "cured by sandalwood oil." At twenty-two he had a hard penile sore treated with "blue stone" cautery and Smith's specific; no treatment intravenously or intramuscularly. At twenty-nine he had appendectomy done at a hospital in Washington. At forty he had typhoid malaria, at forty-two an attack of dry pleurisy lasting thirteen days. For two years he had tinnitus lasting perhaps a whole day. He had moderate dyspnea on exertion. He used two pillows at night, but could sleep without any. His best weight was 165 pounds a year ago, his usual weight 150 pounds a year and a half ago, his present weight 132.

Habits. He had taken no alcohol for eighteen years. Before that he drank spasmodically, but was never drunk but once, when he contracted the disease mentioned above.

P. I. For five years he had had occasional headaches. A year before admission he began to notice marked loss in weight with craving for water and sweets. A physician found 5% of sugar in his urine. On a strict low carbohydrate diet he became sugar free and had remained so. He thought he had continued to lose weight. For a year he had urinated nine or ten times at night. The frequency increased. He was troubled with urgency which amounted to incontinence. For the past three months he had had severe suboccipital headache, sometimes brought on by lying with his head low. It usually began at five in the morning and went away during the day. He became "nervous" very quickly. For five days he had been much nauseated and had vomited fairly often, watery vomitus.

P. E. Slender. Bilateral exophthalmos.

Teeth ill-kept. Gums about incisors retracted. Slight stiffness of neck. Limitation of motion backwards. Cervical glands in the anterior triangles the size of almonds. Inguinal shotty. Chest expansion shallow. Heart slightly enlarged. Apex impulse in the fifth space. Percussion measurements as shown in the diagram.

3½		
2	7	• 3

At entrance left B.P. 195/120, right 195/135. January 20 240/145. *Abdomen*. Slightly spastic throughout the upper portion. Superficial veins enlarged. Liver just palpable below the costal margin. *Genitals*. Penile scar. *Rectal examination and extremities* negative. *Reflexes*. Knee-jerks obtained with difficulty on reinforcement. Are easily tired. Ankle jerks obtained. *Pupils* slightly irregular, slow reactions to light and distance. *Fundi*. Discs negative. A few small patches of old exudate, especially around the left disc.

*T.* and *R.* not remarkable except for a terminal rise to 105° and 65 respectively. *P.* 70-122, with a terminal rise to 154. *Urine* 5 39-85, sp. gr. 1.008-1.018, alkaline at three of six examinations, a slight trace to a large trace of albumin at all, red blood corpuscles at five, leucocytes at four. *Renal function* 20% (two tests). *Blood*. Hgb. 90%, leucocytes 8,000-14,800, polynuclears 68%; reds showed some achromia. *Wassermann* negative. *Non-protein nitrogen* January 7 54.6 mgm., January 17 42.9, January 21 101.0. *Blood sugar* January 7 117 mgm. *Lumbar puncture* January 7. 8 c.c. of clear colorless fluid. Hydrodynamics normal. Six cells. *Wassermann* negative. Globulin positive. Total protein 400. Albumin+++. Gold solution 1112210000. *Neurological consultation*. "I find the pupils equal, circular, reacting to light and accommodation. No knee-jerks obtained. I believe that reflex diminution is dependent upon muscular atrophy, which is especially marked in the quadriceps, although in fact generalized throughout the body. There is hyperesthesia and muscle tenderness, possibly indicative of a low grade neuritic process. . . . The thoracic lordosis is of interest—anomaly (?). *X-ray*. No abnormality made out in spine. . . . Both lung fields clear. No marked change in the root shadows. Outline and position of the diaphragm appeared normal. Marked increase in suprareardiac dullness, apparently due to enlargement and tortuosity of the aorta. To the right of the spine a dense shadow with sharply defined border, continuous with the shadow of the aorta, extended upward beneath the clavicle and was lost in the shadow

of the neck. The heart shadow was a little prominent in the region of the left auricle.

*Orders*. January 7. Salt free low protein diet. Diabetic fluids. Pyramidon gr. v. January 12. Sodium bromid gr. x twice a day. January 16. Pyramidon gr. v.

The pupils on repeated examinations were found to react definitely to light and accommodation. The patient was able to repeat test phrases well. There was found to be tenderness over the lower thoracic eighth and ninth vertebrae and lordosis of the tenth to twelfth thoracic. The patient was unable to stand alone.

January 16 he had a very severe attack of headache and vomiting. January 18 he was very drowsy and at times demented. January 23 he died.

#### DISCUSSION

BY DR. MAURICE FREMONT-SMITH

#### NOTES ON HISTORY

We do not know how old his mother was, so the family history does not mean much.

Excepting for the tinnitus, moderate dyspnea, a very definite loss of weight, and his syphilis, the past history is apparently negative.

His frequency might have been caused by his diabetes before he had treatment, but it progressed until he had urgency which amounted to incontinence. Urgency I think has to be accounted for on some other basis. He must have had some cystitis, some irritation of his trigone, possibly a prostate.

His headaches, nervousness, nausea and vomiting would suggest, with his history of syphilis, the possibility of central nervous system syphilis, although there is here nothing typical. He had not had the prolonged attacks of vomiting which are associated with one type of tabetic crises.

#### NOTES ON THE PHYSICAL EXAMINATION

So far we have a heart that is somewhat enlarged, a blood pressure that is up, and enough to make us suspicious of the central nervous system,—slightly irregular pupils and knee-jerks obtained with difficulty, although the fact that the ankle jerks are obtained makes the significance of the loss of knee-jerks slight.

There is not very good concentration of the urine.

The protein in the spinal fluid is definitely up. The gold solution shows a rather indeterminate curve.

#### DIFFERENTIAL DIAGNOSIS

The question of syphilis must be answered. There is no reason why he should not have had syphilis—have even an aneurism as a result—and now have a negative blood Wassermann and negative spinal fluid. However, his urinary symptoms and the nausea, vomiting and head-

ache hardly fit into our picture of syphilis of the central nervous system. He has, however, a very high protein content in the spinal fluid. This is due probably to kidney retention. I think we shall find that his kidneys are definitely injured that he has syphilis of the aorta, and that his pancreas may possibly show lesions.

DR. CABOT: Dr. Ayer, I think you saw this patient in life. Is there anything to be said from the neurological point of view?

DR. JAMES B. AYER: I was asked to see him with the question, if I remember rightly, "Has he got tabes?" apparently based on the supposition, which I think from this last note was dispelled, that he had Argyll-Robertson pupils and absent knee-jerks. I found normal pupils; I found absent knee-jerks; but there was also moderate tenderness of the nerve trunks. I do not think in uncomplicated tabes we get tenderness of nerve trunks. There was also no typical history of lightning pains or of bladder incontinence, although it has been noted that he had frequency. It seemed to me that we had really nothing in the history, and only one sign in the examination—absent knee-jerks—for tabes; and with negative Wassermann in his blood it seemed to me that tabes was unlikely. The question was also brought up not only of tabes but of paresis, because of a certain mental condition which was put down as a questionable or indefinite mental state. It seemed to me that he was somewhat cloudy but not irrational, with none of the mental picture suggestive of paresis and certainly none of the tremor so characteristic. Moreover in paresis I do not remember seeing a single untreated case in which the Wassermann reactions were absolutely negative in the blood and fluid; they are usually strongly positive in both. Also of course the gold test is not characteristic.

It was said that he could not stand and walk properly. I got him up and he could stand, not too well; he was not paralyzed, he simply was unsteady and very weak. I thought muscular weakness was the predominant finding. It seemed to me we had a good picture of a neuritis which had caused the weakness of thigh and leg muscles and the absent knee-jerks. We had the five per cent. of sugar; we also had a disturbance of his nitrogenous metabolism. Of course the first is more likely, the second less likely to produce a neuritic process. I thought we had enough in his metabolism to explain the neuritic process.

The next point of interest is his peculiar fluid. The abnormality however is one of protein. 400 mgm. per 100 c.c. is about twelve times normal. We get high protein as an isolated finding, which is the case here, primarily with spinal cord tumors, and in that he had a thoracic lordosis it was thought that perhaps he had a cord tumor. However, in such cases the dynamic studies regularly show subarachnoid block.

Here we had no block, and it seemed to me unlikely that he had a tumor; this was also substantiated by the fact that he had no sensory level. That then leaves us with the high protein content an isolated finding unexplained by cord compression. It has been our finding since we have been doing these total protein tests that with high blood pressure, particularly high diastolic, we get high protein in the fluid. It does not usually run 400, but it does frequently run as high as 200 mg. In nephritis we are getting some fluids, not many, in the four years we have been doing this test, but they always have shown high protein, perhaps precisely because they have hypertension. I am still unsatisfied with the explanation. I have put it down as a transudate source of protein. I do not know the mechanism, but it is a fact that with hypertension and nephritis we get high protein as an isolated finding. We have not yet examined the fluid elsewhere to determine if it is a lumbar finding alone. Therefore I think the high protein is explained on the basis of hypertension and nephritis in this case. I think we have no evidence clinically or from the laboratory point of view of syphilis of the central nervous system. That he has had syphilis in the past I grant is most likely. That he has perhaps an aortitis of syphilitic origin I think is likely. I shall be very much surprised if he has paresis or tabes or any other form of syphilis of the central nervous system.

A PHYSICIAN: An interesting example of that high protein is a case on the service with obstruction of the kidney and amyloid disease in the other. The total is 122 with a blood pressure of 115.

DR. CABOT: But the kidneys are pretty well knocked out.

DR. AYER: I think our next step with the examinations will be to correlate protein and non-protein nitrogen tests. That has not been done systematically, as far as I know.

#### CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Chronic nephritis with hypertension.  
Uremia.

#### DR. MAURICE FREMONT-SMITH'S DIAGNOSIS

Chronic nephritis.  
Syphilitic aortitis.  
Chronic pancreatitis?

#### ANATOMICAL DIAGNOSIS

1. Primary fatal lesions  
Arteriosclerosis.  
Arteriosclerotic nephritis.
2. Secondary or terminal lesions  
Hypertrophy of the heart.  
Wet brain.
3. Historical landmarks  
Defect of spinal column.  
Obsolete tuberculosis of a bronchial gland.

**DR. RICHARDSON:** This man had a peculiar defect in his spinal column. Two spinous processes, the twelfth and the first lumbar, were wanting. There was nothing the matter with the spinal column elsewhere.

The definite lesion in the head was marked arteriosclerosis of the vessels of Willis, even the remotest branches showing as fine beaded strings. The brain weighed 1422 grams.

The appendix was not found. There was an old linear scar in the right lower quadrant of the anterior abdominal wall.

The left lung was bound down by old membranous adhesions. In one of the bronchial glands at the bifurcation of the trachea there were several areas of calcareous degeneration, i. e., obsolete tuberculosis.

The heart weighed 498 grams,—considerably enlarged. The myocardium of the left ventricle measured 17 mm., the right 4 mm.,—generally thick. There was nothing on the valves. The coronaries were free. They showed a few small fibrous plaques here and there. As far as the heart goes it was a typical heart for chronic nephritis. The aorta showed a slight to moderate amount of fibrous sclerosis above the diaphragm and a considerable amount below. There were a few areas of atheroma in the abdominal portion. In the great branches there was more or less fibrous sclerosis, best marked in the renal arteries.

The spleen was small but otherwise negative.

The kidneys, combined weight, 200 grams. That is of course small, half-size. The capsules were adherent, the surfaces granular, the markings obscured; the cut ends of the vessels showed fibrosis. Here and there in the cortical portions there were grayish areas and streaks of fibrosis. The cortex varied from where we could make it out with difficulty to three mm.,—typical picture of arteriosclerotic nephritis macroscopically and microscopically.

There was no definite dilatation of the heart. The culture from the heart blood was negative.

**DR. MEANS:** There is one question I should like to ask Dr. Ayer; that is about the natural history of syphilis in the white and colored races. Is it true that negroes are much less likely to have neurosyphilis than white men? I have the impression that negroes are very prone to vascular syphilis but not so prone to neurosyphilis as whites.

**DR. AYER:** I was brought up on that theory too. I am told there is plenty of negro neurosyphilis in the south, and we have here quite a number of negroes that we are treating. I do not seem to remember a single negress that we are treating. I do not think that is so. I am not at all sure that it may not be a little less frequent.

**DR. CABOT:** I have heard it said a good many times in the Johns Hopkins Hospital that it is a good deal less frequent in negroes. One man

said he had never seen a Charcot's joint—of course that is different—and also I have heard them say how rare tabes is considering how common syphilis is in negroes. Of course I have no opinion of my own.

#### CASE 10193

An Irish-American chauffeur of twenty-four entered January 29, complaining of feeling tired and losing strength for two weeks.

**F. H. Good.**

**Habits.** He smoked two packages of cigarettes day and drank twelve or thirteen cups of coffee daily until the present illness. He never drank until two years ago. For the past two years he had gone on a "hootch party" about once a month, drinking about a pint.

**P. H.** He had always been well until the present illness. He remembered no diseases of childhood except measles. He had rare nosebleeds. A year before admission he had a sore throat lasting two or three days, confining him to bed. Two years ago he had gonorrhea with yellow discharge for a month and a half.

**P. I.** Two weeks before admission he was told by a druggist that his sclerae were yellow. Three days later he found that he tired easily and felt that he was losing strength and energy. He now noticed that his skin was yellowish. It had been growing more so ever since. He had slight itching between the fingers. Since the onset he had vertigo and headache when he first got up in the morning. Fatty foods did not taste good, and heavy foods like meat caused gas. Since the onset he had urinated usually once at night. The urine was dark colored and "thickened." For the past week and a half he had taken 15 to 20 one-tenth grain calomel pills a day. Since taking this he had noticed that his teeth were loosening and his gums a little sore. There was a bad metallic taste in his mouth and some salivation. In spite of the calomel and other cathartics his bowels had moved only once a day for the past week; watery grayish-white stools. A week ago after eating six slices of fresh baked bread he was nauseated and vomited material which looked like water, with no solid food in it. He had lost seven pounds in two weeks.

**P. E.** A well nourished, comfortable, clear headed young man with striking icterus of the skin and sclerae. Several carious teeth. Gums spongy. Very high palate. Salivation. A few glands 1 by 1½ cm. in the submaxillary triangle. **Heart.** 1.5 | 7 • 1.5 B. P. 120/70. **Abdomen.** Liver edge felt 4 cm. below the costal margin. The rest of the examination was negative except that the reflexes were sluggish.

Before operation T. 97°-99.5°, P. 60-88, R. 21-12; urine, amount not recorded, sp. gr. 1.012-

1.014, bile strongly positive at both of two examinations, sediment loaded with bile stained cells, many finely granular casts or red blood corpuscles at the first, many hyalin and granular casts at the second; blood, hgb. 90%, leucocytes 5,000, polynuclears 55%, red blood corpuscles slightly achromatic with rare tailing and microcytes, platelets large and slightly increased. Serum dilution 1:600. Wassermann negative. Clotting time 6 minutes. Bleeding time 6 minutes.

February 1 operation was done. The patient stood it well, and next day was about in the same condition, lying quietly in coma the greater part of the time, but with periods of confused struggling and delirium. There was no drainage from the tube. In order to supply bile salts to the duodenum 200 c.c. of a 2% solution of ox gall in .7% saline was injected slowly into the gall-bladder through the tube, after being sterilized by high speed centrifugilization for fifteen minutes. This was repeated that night. The patient also had two subpectorals that day, and glucose by rectum every four hours. At eight in the evening February 3 he had a convolution. He remained in semicomata until eleven, when he had another generalized convolution, became very cyanotic, and died.

#### DISCUSSION

BY DR. EDWARD L. YOUNG, JR.

The history is typical of what we call catarrhal jaundice. It has most of the earmarks that go with the mild infectious process, with the upset of liver function, with the lack of bile in the bowel, and the accumulation of bile in the system. The symptoms of salivation and loosening of teeth etc. of course are just mercury poisoning from an overdose of calomel.

So that up to the physical examination there is nothing to say except that he has the typical story of catarrhal jaundice and of course in the vast majority of cases this lasts from three to four or five weeks and then clears up and that is the whole story.

The work "striking" of course means that he has more jaundice than ordinarily goes with the average type of catarrhal jaundice.

The urine shows the irritative process in the kidneys from the bile.

A serum dilution of 1:600 is evidence of the accumulation of bile in the system, the normal being 1:20.

DR. CABOT: I do not see that there is any record about albumin in the urine.

MISS PAINTER: There was no albumin.

DR. YOUNG: The clotting time and bleeding time are both about right.

Of course up to this time,—if we saw him—I do not myself see the evidence that would make us sure of any other diagnosis than an infectious jaundice. Now we know the man is dead and that makes a diagnosis for us at once.

I should like to ask Dr. Cabot and Dr. Means if up to this point there is anything here that

throws this over into anything more definite than infectious jaundice.

DR. MEANS: No. I wondered what they were operating for.

DR. YOUNG: I think I know; but I should like to know whether there is anything more to your medical minds than would make you think of catarrhal jaundice, or infectious jaundice, as Drs. Jones and Minot want us to call it. I should suppose there was something to make them think he had something more than infectious jaundice. Because I assume operation was done to see if drainage of the liver through the biliary tract would be of any therapeutic value.

DR. CABOT: Was this done for the advancement of science?

DR. YOUNG: Possibly. I don't see any other reason for it. Of course to drain a gall-bladder in a man of this age is a very simple proposition, if we can consider any opening of the abdomen a simple proposition. Whether it is justified or not seems to me to depend on whether there was any more evidence than we have on paper. The thing that makes me think so is the next sentence, "the next day was about in the same condition, lying quietly in coma the greater part of the time." That makes me think there was something more.

DR. H. B. SPRAGUE: Before operation he developed rather strange mental symptoms which indicated cholemia, and then became comatose.

DR. CABOT: How long before operation did these symptoms come on?

DR. SPRAGUE: About twenty-four hours. He lay quietly in bed when he first came in, and not very much attention was paid to him because we assumed he had simple infectious jaundice. Then he became slightly irrational, got out of bed, and was put back with some difficulty. He tossed around in bed, and the jaundice kept increasing quite markedly. Within twelve hours he had become semicomatoso, his breathing stertorous. It was felt that operation was the only chance for him to secure drainage. That is why the surgeon was called to help us out.

DR. YOUNG: In other words the surgeon was simply a technician to try a therapeutic measure in a condition of unknown nature, to see whether it would by any chance give any help. Because, of course, with the description we now have the diagnosis changes from an infectious jaundice of the simple type to the type which has apparently become much more common, the acute yellow atrophy, which may be the same thing as the simple infectious type except that the toxin which is easily overcome on the one hand runs wild on the other and gets the patient instead of the patient getting it. The description given is the basis for that diagnosis. The operation I assume was as stated, just drainage.

DR. CABOT: Dr. Jones, we are very much interested to know why they operated on him.

DR. CHESTER M. JONES: He had shown two or three days before, as I understood from the

house officer, a flow of bile into the duodenum. That apparently stopped. I felt right along that he probably was a case of very unusual infectious (catarrhal) jaundice. He seemed in every respect like some of the more severe cases we have seen during the last two years. He tended to run a low white count with quite a high proportion of leucocytic or mononuclear cells, as most of them do. He had very little temperature. The physical findings seemed to be perfectly consistent. Most of those cases probably are cases of intrahepatic block rather than obstruction due to blocking of the common bile duct. But a certain number seem to be associated with obstruction of the common bile duct, which makes the jaundice much worse than it would otherwise be.

He was rapidly getting worse, and it seemed justifiable to go in on the chance that the block might be below the liver rather than above, in which case he might obtain enough relief to allow him to recover. At the time we operated it was obviously a question whether he was going to live or die within a day or two. When we operated on him his liver was not small, the capsule was not wrinkled. It was firm and did not show patches of yellow discoloration, as do most cases of yellow atrophy. All of us who saw it agreed that it did not look like an acute yellow atrophy liver at the time of operation.

He died two days later I think, at which time his liver was undoubtedly a good deal smaller than at operation. There had been no apparent decrease in size of the liver prior to operation, the edge always being palpable.

I went over a specimen of blood taken immediately before the operation. The smear showed even more than the house officer records suggesting the appearance of these peculiar mononuclear cells which are true mononuclears, which may or may not belong to the lymphocytic series, and which frequently contain vacuoles and sometimes red cells. These cells are seen in even the simplest cases of catarrhal jaundice. It seemed to me that here was possibly a case of real catarrhal jaundice which had gone to an unusual degree of severity. To my mind acute yellow atrophy is simply an end result of severe liver injury. Recovery occasionally occurs.

DR. CABOT: You don't mean to suggest that all cases of acute yellow atrophy are of infectious origin?

DR. JONES: No; I think they can be due to quite a number of causes. Diarsenol is one, and some of the tetrachlorethane workers I believe had acute yellow atrophy. Dr. Minot told me this morning of quite a number of cases due to such a cause.

DR. MEANS: Isn't it your idea that it may deal the liver a slight insult from which it recovers, or it may be a severe insult which goes on to acute yellow atrophy and death?

DR. JONES: I think that is possible, because we have had in the last few years cases of cat-

arrhal jaundice varying from three or four to 150 days' duration, all of them showing similar signs and symptoms. As a result of careful observation on a series of these cases throughout the course of the disease it has seemed to me it was a liver affair in every case, in some cases mild, but sometimes, as Dr. Means suggests, of much greater severity. If that is true I do not see why we may not rarely get enough damage to result in atrophy.

DR. CABOT: Have we had any luck in getting organisms out of these cases during life?

DR. JONES: No, sir. In several we have tried to find spirochetes and have not been able to do so, from the blood or from the urine. The duodenal contents have never been at all satisfactory, although I think it may be possible in the very early days of catarrhal jaundice that a search for the causative agent may yet be successful.

DR. CABOT: Has Dr. George Blumer got anything out of his cases?

DR. JONES: No, sir. He did not report anything in his paper,\* and I believe he has not since been able to get anything.

DR. YOUNG: The chemists tell us there are various by-products in home-brew distillation. Do you think there may be anything in that which would affect the figures in these cases of acute yellow atrophy? Is there a definite increase in these cases?

DR. JONES: Yes; I think there is no question about that. It is quite marked in the hospital statistics and also in cases outside. That increase may be due to several factors. Diarsenol has probably added one cause to the list. I believe that the influenza epidemic with its very severe toxemia may have added a few cases. It is quite common to get cases which at the beginning look much like a mild case of influenza.

DR. CABOT: What were those figures you recently looked up, Miss Painter?

MISS PAINTER: There were three cases of acute yellow atrophy in forty-four years, from 1870 to 1913 inclusive, all autopsied; and there have been fourteen cases since then, eleven autopsied; ten of the eleven died since 1919, four in 1922.

DR. CABOT: We had one at the Brigham Hospital yesterday. The increase certainly is not confined to this country. I saw Sir H. D. Rolleston two years ago. He was then member of a commission to investigate why in the British Empire acute yellow atrophy had increased since the war. I do not suppose home brew is used there. There was a report from the Mayo Clinic in which they said they got jaundice in their cases, kept on giving diarsenol, and cured the jaundice.

DR. JONES: Either that report or another also said that the increase of "diarsenol" jaundice was coincident with a sort of epidemic of jaundice all through that country.

\*Infectious jaundice in U. S., J. A. M. A., Aug. 4, 1923, p. 353.

**A PHYSICIAN:** In relation to the English epidemic, I was talking with an English pathologist who said the quality of English beers and ales is much inferior since the war, and that the standard is so low that people are afraid to use them.

**DR. MEANS:** There is a possibility of arsenic in beer, I believe.

**DR. YOUNG:** Is it possible to make any other diagnosis, Dr. Jones, than acute yellow atrophy on this patient as we have him now?

**DR. JONES:** I don't think so.

**DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS**

Acute yellow atrophy.

**PRE-OPERATIVE DIAGNOSIS**

Infectious jaundice.

**OPERATION**

Gas and oxygen. Six inch right rectus muscle splitting incision. This case presented a peculiarly interesting problem. The clinical course was suggestive of a catarrhal jaundice, but the rapid increase in the severity of symptoms and overwhelming cholelithiasis made it advisable to rule out any element of common duct obstruction. If obstruction by edema in the lower portion of the common duct was in any way contributing to the liver damage it was thought that this could be removed by gall-bladder drainage. Because of the delirious condition of the patient operation under local anesthesia was impossible, so he was given gas-oxygen with local infiltration of the abdominal wall. The liver edge was approximately 3 cm. down from the costal margin. The entire liver was of firm consistency with smooth glistening peritoneal surface. The gall-bladder and duets were normal. There was no evidence of inflammation about the head of the pancreas. The foramen of Winslow admitted two fingers. There were no enlarged glands in this region. There was no free fluid in the abdominal cavity. The gall-bladder was aspirated but only a small amount of pale bile was obtained. A rubber tube was inserted into the gall-bladder and held in place by a double purse string suture inverting the mucosa. This tube was brought out through the abdominal wall which was closed around it. There were no stones in the gall-bladder or duets.

**CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)**

Acute catarrhal jaundice.

Operation, cholecystostomy.

**DR. EDWARD L. YOUNG'S DIAGNOSIS**

Acute yellow atrophy.

**ANATOMICAL DIAGNOSIS**

Yellow atrophy of the liver.

Icterus.

Cholecystostomy.

**DR. RICHARDSON:** The skin and conjunctivae showed well marked icterus.

Through the operation wound in the anterior abdominal wall a rubber tube ran down into

the gall-bladder. The gall-bladder and bile ducts were frankly negative.

The anterior margin of the liver was two cm. above the costal border. The liver was small and showed the classical picture of yellow atrophy, macroscopically and microscopically.

Any further examination of this case was restricted.

**DR. CABOT:** In the case that we had yesterday at the Brigham Hospital the liver weighed about 600 grams. But under the microscope that 600 grams was shown to consist largely of tissue other than liver cells, so that really there was almost no liver left at all. The bile passages and gall-bladder were entirely empty of bile. Yet the patient was tremendously jaundiced and stuffed with bile. After all, have we any reason to suppose the liver makes bile? If the liver makes bile, why doesn't some of it go down? Why does all of it go back? Can we suppose that the liver secretes bile as the kidney secretes urine? We do not suppose that the kidney makes urine. Have we any evidence that the liver makes bile in any other sense? If we look at this body and see the tremendous staining of all the rest of the body and the emptiness of the bile ducts it is hard to think of the liver as making any bile.

**DR. JONES:** One reason, I suppose, why bile does not appear in the larger bile ducts and farther down is that there is practically no connection between the liver cells and the ducts broken up by the destruction of liver tissue. There is no continuity of anything, as seen microscopically, after the thing begins to go. There is practically a destruction of liver cells which are full of bile pigment presumably, and that is taken up by the blood. It is possible, as far as the bile pigment part is concerned, for it to be formed elsewhere in the body than in the liver, but I think the general impression is that that is more of a secondary function that can take place if the liver is not functioning rather than under normal conditions. The extrahepatic formation of bile pigment, however, has been definitely proved by several careful investigators to exist.

**DR. CABOT:** When we say there is bile in the tissue we mean bilirubin; we do not mean cholesterol, etc.

**DR. YOUNG:** Yet there are certain cases of prolonged obstruction from stone that will produce the so-called white bile with absence of pigment.

**DR. JONES:** That is probably due to the secretion of the bile ducts or of the gall-bladder itself. I believe Rous showed that the bile ducts were capable of forming a fluid substance which is practically colorless. That is the secretion of the duct itself.

**DR. YOUNG:** In other words, the liver has ceased its function entirely, and that secretion comes entirely from the ducts.

**DR. JONES:** Yes.

## MEDICAL HISTORY

MARIE ANTOINETTE'S FIRST  
CONFINEMENT*Mr. Editor:*

The following account is from "Memoirs of the Private Life of Marie Antoinette, Queen of France and Navarre, by Madame Campan, First Lady of The Bed Chamber To The Queen."

"The countess d'Artois already had two children, while the Queen had not even a hope of giving heirs to the throne. There were many secret conjectures respecting the obstacles which could so long have opposed this. At last about the latter end of 1777, the Queen, being alone in her closet, sent for my father-in-law and myself, and giving us her hand to kiss, told us that looking upon us both as persons deeply interested in her happiness, she wished to receive our congratulations, that at length she really was the Queen of France, and that she hoped soon to have children, that up to that moment she had concealed her grief, but that she had shed many tears in secret.

"We have calculated and found that she was brought to bed of Madame, daughter of the King, exactly a year after the confidence she had deigned to repose in us." . . . "The Queen's pregnancy advanced: Te Deums were sung and prayer offered up in all the cathedrals." "At length on the 11th of December 1778, the Queen felt her pains come on. The royal family, princes of the blood and great officers of state, passed the night in the room adjoining the Queen's bed-chamber. Madame, the King's daughter, came into the world before mid-day on the 19th of December."

"The etiquette of allowing all persons indiscriminately to enter at the moment of the delivery of a Queen, was observed so literally, that at the instant when the accoucheur, Vermond, said aloud, "La Reine va s'accoucher," the torrents of inquisitive persons who poured into the chamber were so great and tumultuous that the rush was near destroying the Queen. During the night the King had taken the precaution to have the enormous tapestry screens, which surrounded her majesty's bed, secured with cords. Had it not been for this fore-sight they would certainly have been thrown down upon her. It was impossible to move about the chamber, which was filled with so motley a crowd, that any one might have fancied himself in some place of public amusement. Two Savoyards got upon the furniture to obtain a better sight o' the Queen, who was placed opposite the fireplace, upon a bed prepared for the moment of delivery. The noise, and the sex of the infant, which the Queen was made acquainted with by a signal previously agreed on, as it is said, with the princess de Lamballe, or some error of the accoucheur, brought on symptoms which threat-

ened the most fatal consequences, the accoucheur exclaimed, "Give her air—warm water—she must be bled in the foot!" The windows were caulked up, the King opened them with a strength which his affection for the Queen gave him at the moment. They were of great height and pasted over with strips of paper all round. The basin of hot water not being brought quickly enough, the accoucheur desired the chief surgeon to use his lancet without waiting for it. He did so, the blood streamed out freely, and the Queen opened her eyes. The joy which now succeeded to the most dreadful apprehensions, could hardly be contained. . . . The Queen was snatched from the very jaws of death, she was not conscious of having been bled, and on being replaced in bed, asked why she had a linen bandage upon her foot."

Madame Campan tells us that the barbarous custom of having the public present at the accouchements of the Queens of France, which custom went back for centuries, was abolished forever after the first confinement of the Queen, the princesses of the family, the princesses of the blood, and the chancellor and the ministers being deemed sufficient to attest legitimacy.

Very truly yours,

WM. PEARCE COUES, M. D.

Brookline, Mass.

April 29th, 1924.

## CURRENT LITERATURE

## PAGE'S DISEASE OF THE FEMALE NIPPLE

BLOODGOOD, J. C. (*Archives of Surgery*, March, 1924). Bloodgood presents one of his characteristically thorough articles with detailed description and pathological illustrations; a study of thirty cases. The author states in his head-line that it is a preventable disease, curable in its early stages. He recognizes certain benign lesions of the nipple which heal without operation—these are the lesions characterized by a finely granular, red condition of the nipple, or a wart-like condition; but he emphasizes the fact that, when the next stage is reached, which is evidenced by crust formation, this means superficial ulceration and from this point on cancer may be present or absent for varying periods. The evidence would suggest, however, that cancer develops ultimately in every ulcer of the nipple if the proper treatment is not instituted at once. He believes that there is but one operation for cancer of the nipple, no matter how early, and that is the complete operation. His whole evidence is against excision of only the breast. It is unnecessary when the lesion is benign, and not sufficient when the lesion is malignant. The author feels confident to state from his experience that treatment with X-ray, radium, or violet rays, has little or no effect in this disease.

[E. H. R.]

## STUDIES IN EXHAUSTION

(CRILE, G. W. (*Archives of Surgery*, March, 1924)). Crile presents an article characteristic of his well-known style dealing with exhaustion mainly dependent upon septicemia, and makes the following general summary:

1. The effects of septicemia have been studied (a) by histologic observations; (b) by measurements of the H-ion concentration and of the alkali reserve

of the blood; (c) by estimations of the iodin content of the thyroid gland, of the epinephrin content of the suprarenals and the epinephrin activity of the pituitrin activity, of the glycogen content of the liver and of voluntary muscle; (d) by measurements of the electric conductivity of the brain and liver; (e) by direct measurements of the temperature of the brain and the liver, and (f) by clinical observations.

2. All these lines of investigation indicate that changes in the central nervous system are the primary cause of the cycle of phenomena which mark the progress of the exhausting which is the end-result.

3. The experimental evidence indicates that the liver and the suprarenals are associated with the brain in the production of phenomena which are initiated by the changes in the brain.

4. The limitation of the changes produced in normal animals by an infection, by the presence of agents which depress the activity of the central nervous system, strongly supports the conclusion that the brain is the primary factor in the response to infection.

[E. H. R.]

#### THE VALUE OF SGAMBATI'S REACTION FOR ACUTE PERITONITIS

DEUTSCH, H., AND GRAHAM, E. A. (*Archives of Surgery*, March, 1924). These authors conclude, after extensive clinical research, that Sgambati's reaction is not specific for peritonitis; the red obtained from this reaction is indigo red, an oxidation product of indoxyl; its diagnostic importance is similar to that of indican.

[E. H. R.]

#### ANAESTHESIA OF THE SPLENCHNIC NERVE IN ABDOMINAL OPERATIONS

FISCHER, H. (*Annals of Surgery*, March, 1924). Fischer describes the technic of producing this type of anaesthesia which he claims is no more difficult than that of spinal anaesthesia, and this form of anaesthesia combined with local abdominal anaesthesia he claims is ideal for abdominal operations in patients who will not bear a general anaesthetic.

[E. H. R.]

#### RECENT CONTROVERSIAL QUESTIONS IN GALL-BLADDER SURGERY

MARTIN, W. (*Annals of Surgery*, March, 1924). This author discusses pros and cons especially of cholecystectomy in a very reasonable and well-balanced manner, and draws the following conclusions from his analysis of 229 cases at St. Luke's Hospital during the past two years:

"There have been no reports of serious interference with function or loss of nutrition following the removal of the gall-bladder, although thousands have been removed during the last forty years.

"There are occasional reports of damage done to the common duct during simple cholecystectomy, even by operators of large experience.

"The removal of a slightly infected gall-bladder or its drainage is accompanied at times by extensive adhesions fixing the pylorus or the duodenum to the under surface of the liver and giving symptoms of interference with the functions of these organs.

"The proof that the gall-bladder should be removed for very slight lesions of the wall, accompanied by symptoms of indigestion, seems to me not yet sufficiently established.

"It goes beyond demonstrated fact to assume that slight degrees of cholecystitis do not resolve.

"The prophylactic removal of a normal gall-bladder does not seem justified.

"The proof is not convincing that the majority of infections of the wall of the gall-bladder, sufficient to give symptoms, represent a direct extension to its

walls from an inflamed liver through the lymphatics. "That bacteria enter the portal circulation from an obliterated appendix in large enough numbers to produce a hepatitis and cholecystitis recognizable clinically is by no means established.

"In the very large percentage of cases of cholecystitis cholelithiasis must be considered as an important factor in determining the initial lodgment, the persistence and the transference of the infection.

"Autopsy records and clinical experience furnish abundant evidence of the very slow progression of lesions in the gall-bladder.

"The removal of the gall-bladder for gall-stones and well-marked lesions of the gall-bladder wall, uncomplicated by lesions of the common duct, is accompanied by a low mortality and by excellent results.

"There is little clinical or autopsy evidence of the association of persistent hepatitis, cirrhosis or pancreatitis when the disease is confined to the gall-bladder wall.

"Common duct stones, choledochitis and cholangitis are late lesions and have a high mortality, and patients should come to operation before these lesions develop."

[E. H. R.]

#### SURGERY OF RENAL TUBERCULOSIS

JUDD, E. S., AND SCHOLL, A. J. (*Annals of Surgery*, March, 1924). These authors summarize their study as follows:

"Eight hundred seventy-four patients with renal tuberculosis were treated surgically. Nephrectomy was performed on 863 and an exploratory operation on, nine. Complete post-operative data were obtainable concerning 611 patients. Usually complete lumbar nephrectomy was performed. In a few instances, transperitoneal nephrectomy was performed or the peritoneal cavity was opened while the kidney was being removed by the lumbar route; such contamination of the peritoneal cavity markedly increases the operative risk.

"In the presence of a perinephritic abscess, removal of the kidney and drainage of the abscess at the same time increases the operative risk. Two of eight patients died following such procedures. None of the eight patients died on whom the two-stage operation was performed.

"In eighteen cases of bilateral infection one kidney was removed. Four patients died from anuria immediately after the operation, and ten died during the next eighteen months.

"Twenty-three patients (2.7 per cent of 845 who had had unilateral nephrectomy) died the first month after operation. One hundred ninety-one (31.2 per cent of the 611 patients) are dead; 358 (58.6 per cent) are completely cured on an average of four years after operation, and sixty-two (10.1 per cent) are still having urinary trouble."

[E. H. R.]

#### PARTIAL GASTRECTOMY FOR GASTROJEJUNAL ULCER

BALFOUR, D. C. (*Annals of Surgery*, March, 1924). Balfour presents an article beautifully illustrated by drawings of his operative procedure, and states in closing that he is finding increasing indications for partial gastrectomy for gastrojejunul ulcer, including its complications, colon fistulas, and so forth, and in twelve cases there has been no mortality. In view of the serious condition of many of these patients, the extensive inflammatory products in the operative field, and the fact that several operations had been performed on some of them, this is very gratifying. The results thus far have been excellent. He is convinced that partial gastrectomy is the operation of choice in the majority of such cases.

[E. H. R.]

## PROGNOSIS IN GIANT-CELL SARCOMA OF THE LONG BONES

COLEY, W. B. (*Annals of Surgery*, March, 1924). Coley presents a beautifully illustrated article based on the end results in a series of fifty cases, and discusses each case with his usual thoroughness and detail. No clean-cut rules for estimating prognosis are laid out, but it seems clear that the estimation of the degree of malignancy of the giant-cell sarcoma depends almost entirely upon the accuracy of the pathological report. The author instances several cases which were reported benign, which had recurrences anywhere from six to twenty years after the first treatment, and in which a review of the slides taken at the time of the first procedure showed the case to be really malignant and not benign. One should base his assumption of malignancy, therefore, upon a most careful pathological study of the specimen. [E. H. R.]

## BENIGN AND MALIGNANT ENDOMETRIAL IMPLANTS IN THE ENDOMETRIAL CAVITY, AND THEIR RELATION TO CERTAIN OVARIAN TUMORS

SAMPSON, J. A. (*Surgery, Gynecology & Obstetrics*, March, 1924). Sampson presents a remarkably beautifully illustrated article of twenty-four pages on this rather rarely written about subject. His color plates are of exceptional vividness and beauty. He draws the following conclusions from his observations:

"The implantation of benign endometrial tissue upon the surface of the various structures in the pelvis is of common occurrence. It was observed by me in 64 of 296 abdominal operations for pelvic conditions in 1 year.

"The implants, wherever situated, may invade the underlying tissue on which they develop, spread over the surface of the same, or invade other structures in contact with them. In their reaction to menstruation, epithelium may be cast off and give rise to other or secondary implants.

"The peritoneal implants are usually small, slow growing, and insignificant, but occasionally spread and become invasive.

"The ovarian implants are frequently much more active than the peritoneal, suggesting that the ovary is generally their most "fertile soil." They often develop into superficial or deep menstruating ovarian cysts. The superficial cysts are small, a few millimeters in diameter, while the deeper ones may reach a much larger size, several centimeters in diameter. Whether small or large, these endometrial cysts or haematomata often perforate, and some of their contents, carrying epithelium cast off by menstruation, escapes into the peritoneal cavity. Other or secondary implants apparently arise as a result of these perforations. The ovary may be considered an incubator, hot bed, or redistributing focus, in the origin of these secondary growths.

"The evidence that these implants may primarily arise from epithelium, with, at times, bits of stroma derived from the uterine mucosa (possibly occasionally from the tubal mucosa), as a result of a backflow of menstrual blood through the tubes, is as conclusive as that of the origin of any pathological condition (see text of article).

"Clinical observations (see text of article) demonstrate that curettage and manipulation of the uterus may force blood containing bits of endometrial tissue out through the tubes into the peritoneal cavity.

"It seems advisable to lay down the following rules in the treatment of this disease:

1. A patient in whom cancer of the body of the uterus is suspected should be examined with great care and gentleness.

2. The diagnostic curettage should be employed only in doubtful cases or poor operative risks, and if used should be done very gently.

3. Radium should not be used, as the insertion of the capsule containing the radium acts as the plunger of a piston syringe, forcing contents of the uterine cavity into the tubes.

4. Abdominal hysterectomy with the least possible manipulation of the uterus, and the closure of the channels through which material may escape from the uterus into the field of operation, offer the best chance for a permanent cure. The fimbriated ends of the fallopian tubes should be first ligated; the ovarian vessels, round ligaments, and uterine vessels should be doubly ligated, cutting between the ligatures; the vagina should be clamped below the cervix and carefully cleansed before severing the vagina below the clamp and removing the uterus." [E. H. R.]

## CLINICAL OBSERVATIONS ON THE ETIOLOGY OF GALL STONES IN WOMEN

SCHRAGER, V. L. (*Surgery, Gynecology & Obstetrics*, March, 1924). This author believes that cholecystitis of middle adult life in women, in a large number of cases, traces its origin to the first pregnancy and as such, it must be recognized as a distinct clinical entity. If this conclusion is supported by observations of other clinicians, it may tend to destroy the clinical superstition that young women do not have gall stones. It may train the medical student, the intern, and the general practitioner to link the vague abdominal phenomena occurring during the first pregnancy and recurring during the subsequent pregnancies with the clinical finality of the gall-stone picture present in patients between the ages of 35 and 45 years. [E. H. R.]

## THE INDICATIONS AND RESULTS OF THE INTERPOSITION OPERATION IN THE TREATMENT OF CYSTOCELE AND PROLAPSE OF THE UTERUS

MILLER, C. J. (*Surgery, Gynecology & Obstetrics*, March, 1924). This author, reviewing a series of fifty patients, finds that, in view of the excellent results obtained (ranging from 90% to 95% of cures), it is natural to conclude that the interposition operation combined with the correctly applied principles of plastic surgery of the pelvic floor will result in a higher percentage of satisfactory results than any other operation so far devised for the relief of uterine prolapse and associated cystocele. [E. H. R.]

## THE EFFECTS OF RADIUM RAYS UPON THE OVARY

MATTHEWS, H. B. (*Surgery, Gynecology & Obstetrics*, March, 1924). Matthews presents an experimental, pathological, and clinical study and draws the following conclusions:

"The main histo-pathological changes in human ovaries brought about by exposure to radium rays in sufficient "dosage" to produce amenorrhoea for varying periods of time, e. g., 800 to 1200 milligram-hours or more, is a round-celled infiltration, engorgement of the blood vessels, and an extensive fibrosis in and about them and throughout the entire organ, with more or less disintegration of the follicular apparatus. These changes are increased in extent proportionately with an increase in the "dose" administered, so that finally there is complete destruction of all the follicles (ripe and unripe) with an extreme fibrosis throughout the entire organ, amounting, in many of the blood vessels, to an obliterative endarteritis.

"From the data at hand it seems reasonable to state that after the usual "dose" of radium, as used

to regulate non-malignant uterine bleeding, pregnancy may occur and delivery be accomplished in a normal manner. If more than 600 to 800 milligram hours or their equivalent is used, fertility, in all probability, will be destroyed.

The tendency to abortion is slightly more common following the use of radium. The ratio of abortions to normal labors in the series herein reported is as 1 to 2.6, whereas the normal ratio in the United States is as 1 to 3 or 4.

"The offspring of previously radiated human subjects show no untoward effects and usually develop in a normal manner. Occasionally they are somewhat below normal in their physical development, but this cannot be said to be due entirely to the effects of the radium.

"It would seem from the data at hand—both experimental and clinical—that age is a very important factor as regards irradiation effects. The ovaries of active healthy young animals can withstand relatively much larger non-sterilizing "doses" of radium rays than the ovaries of older less active animals can. This phenomenon is undoubtedly just as true in humans.

"In view of the present day confusion and uncertainty as regards dosage nomenclature, a universal standardized method of expressing "radium dosage" is highly desirable.

"The employment of radium irradiation in afflictions of the female reproductive system should remain in the hands of those gynecologists and obstetricians who have had special training in radium therapy, for the indiscriminate use of such a valuable therapeutic agent can reflect only to our discredit."

[E. H. R.]

#### A SYMPOSIUM ON HAEMORRHAGE

(*Surgery, Gynecology & Obstetrics*, March, 1924). This contains six articles. That by Starr speaks particularly of post-operative haemorrhage, and this author believes that he has no such thing in his practice because he uses a running suture which is securely tied and never slips. The subject of haemorrhage from the stomach, haemorrhage from the genito-urinary tract, and the relation of blood coagulation time to post-operative haemorrhage are discussed. Feinberg finds in analyzing 500 cases of tonsillectomy that the coagulation time is apparently not influenced by such things as age and sex, that the average coagulation time for cases having previous haemorrhage was not higher than the average for the series; that, in a series of 71 cases with a coagulation time of six minutes or over, the frequency of haemorrhage was very little higher than that for the series of 500 cases. [E. H. R.]

#### AN ANALYTICAL STUDY OF 100 CASES OF SELECTED VESICAL NECK OBSTRUCTIONS OPERATED BY THE AUTHOR'S CAUTERY PUNCH

CAULK, JOHN R., AND SANFORD, J. HOY (*Jour. of Urology*, Jan., 1924). There are four classes of so-called collar involvements of the vesical neck: (1) Slight vesical ingrowths completely encircling the orifice; (2) a more pronounced circular collar arrangement plus a possibly sufficient bulging to produce shallow clefts; (3) more intravesical bulging with deeper clefts, including lobular protrusions at any area of the sphincter; (4) dense scleroses. Fifty per cent of the author's cases during the last year showed these lesser degrees of vesical neck involvement. Of 100 cases, 90 were suitable for the punch operation. The punch operation is not followed by incontinence. These obstructions are differentiated from gross obstructions by rectal and cystoscopic

examinations, neither alone being sufficient. The symptoms and clinical findings are no criteria of the extent of the lesion. Absence of rectal enlargement indicates the punch operation.

The following technical points in cautery punch operations are emphasized: Alternating current is preferred; it is run to red heat when the punch is engaged and 4 seconds are sufficient to complete the burning. Rotation of the blade during the burning secures complete and equal distribution of the heat around the blade. In large obstructions one or two pieces are removed at a time and different parts of the orifice are treated at different sittings. Hemorrhage occurred only once; epididymitis, 7 times; post-operative chills, 8 times. The retention catheter was used 31 times. Nocturia was relieved in 70 per cent of the cases. The residual urine disappeared more or less completely in all cases. [B. D. W.]

#### URINARY ANTISEPTICS

YOUNG, HUKE H. (*Jour. of Urology*, January, 1924). The relative values of antiseptics is taken up along with the methods of administration. Much can be accomplished now, and more will be accomplished in using intravenous methods in treating many infections, both general and local; the future will bring out importance of drugs that can be given intravenously, and which will probably cure not only acute septicemias, otherwise fatal, by rapid sterilization, but also serious chronic local infections such as those encountered in the urinary tract. [B. D. W.]

#### URINARY ANTISEPSIS

DAVIS, EDWIN (*Jour. of Urology*, Jan., 1924). The experimental work which has led up to the internal administration of acriflovine is outlined by Davis, and the results obtained by the clinical use of this dye are summarized. A large proportion of cases of acute urinary infections have shown prompt improvement. Chronic urinary infections have not readily responded. Improvement was noted in only 50 per cent of cases, and in most of these the pus and bacteria reappeared in the urine after discontinuing the treatment. In acute anterior gonorrhreal urethritis acriflovine administered orally is not a dependable prophylactic for preventing the extension of the infection to the posterior urethra. Acriflovine administered orally is of benefit in acute posterior gonorrhreal urethritis in that it lessens the duration and severity of the acute symptoms. Mild catharsis or slight nausea was observed in approximately 30 per cent of the patients. [B. D. W.]

#### PRELIMINARY LIGATION OF THE RENAL VESSEL AS AN AID TO NEPHRECTOMY

EISENDRATH, D. N., AND PORTIS, B. (*Jour. of Urology*, Feb., 1924). The indications for such a preliminary ligation of the renal vessels is, first, in cases where primary nephrectomy is to be performed and we anticipate severe bleeding during efforts to mobilize or from inability to ligate the pedicle satisfactorily even with the subcapsular method of Federoff. The second indication is in cases like the first one where a secondary nephrectomy is to be performed, previous attempts to mobilize the kidney having been abandoned on account of hemorrhage. We do not think that it is to be employed as the first step in the removal of neoplasms since the pedicle can be more easily exposed by an incision which does not open the peritoneal cavity. [B. D. W.]

**AN EARLY CASE OF CARCINOMA OF THE PROSTATE ASSOCIATED WITH BENIGN HYPERPLASIA**

SHAW, E. CLAY (*Jour. of Urology*, Jan., 1924). The author presents a case giving the typical history and physical findings of benign prostatic hyperplasia, and upon which perineal prostatectomy was performed. Upon microscopic examination of the specimen a small unsuspected area of carcinoma was found. Serial sections showed two separate areas of carcinoma limited to the right lateral lobe and completely surrounded by normal and hypertrophied prostatic glands. The carcinoma was of the pure adenocarcinoma type. The line of demarcation between the carcinomatous area and surrounding adenomatous tissue was everywhere distinct. [B. D. W.]

**THE VALUE OF THE "UREA CONCENTRATION FACTOR" IN UROLOGY**

PATCH, F. S., AND RABINOWITCH, I. M. (*Jour. of Urology*, Jan., 1924). In lesions of the kidneys, whether primarily or secondarily associated with azotemia or other evidence of impairment of the excretion of nitrogenous substances, the determination of the urea concentration factor is of greater value for diagnosis, and a better index of progress than the individual consideration of either the blood urea nitrogen or urine urea concentration. [B. D. W.]

**COMPARATIVE STUDY OF CIRCULATORY CHANGES IN HYDRONEPHROSIS, CASEO-CAVERNOUS TUBERCULOSIS, AND POLYCYSTIC KIDNEY**

HINMAN, FRANK, AND MORISON, DUNCAN M. (*Jour. of Urology*, February, 1924). The circulatory changes were studied by stereoscopic X-ray after injection with barium sulphate and gelatine. In hydronephrosis the circulatory changes are produced by mechanical displacement acting by compression or stretching according to the course of the vessels in relation to the direction of force. As the larger vessels become attenuated by stretching there is diminished flow of blood to and from the cortex, producing a partial anemia. This tends to lessen the normal tissue tone and favors a relaxation which is readily taken advantage of by the process of distention.

In caseo-cavernous tuberculosis the factor of infection is present which not only produces changes in the vascular walls, thereby impairing the tissue vitality, but also provides the means of obstruction and creation of a secondary mechanical hydronephrosis. The secondary changes may almost completely mask the original picture. The circulatory changes in polycystic kidney appear to be mechanical and involving chiefly the finer cortical vessels by displacement and compression. The larger trunks show little departure from the normal arrangement. In general distribution the vasculature simulates the fetal type. [B. D. W.]

**MALIGNANT TUMORS OF THE THYROID**

HERBST, W. P., JR. (*Annals of Surgery*, April, 1924). Herbst studied 290 patients with malignant tumors of the thyroid seen at the Mayo Clinic for the past twenty years, and draws the following conclusions:

- The degree of malignancy in the lesions of the thyroid is according to the order in which they are mentioned: sarcoma, carcinoma, malignant adenoma, and malignant papilloma, sarcoma being the most malignant and papilloma the least.

- By far the best results are obtained in the cases in which operation is performed before the malignancy has infiltrated the capsule, and this

group of cases is the one in which the clinical diagnosis of malignancy is rarely made.

- Occasional unexpected happy results occur in cases of malignant papilloma found practically inoperable at the time of operation, but in which radical removal of infiltrating growths, and even of glands infected by metastasis, has been practiced.

- There is no grave contra-indication to total extirpation, so far as myxoedema is concerned, in cases in which all tissue infected by malignancy may be removed.

- X-ray and radium therapy have not been used long enough nor on a sufficiently large number of patients to estimate their true worth.

- Metastasis to bone is rare in this group of malignancies of the thyroid. The lungs and liver in the order named are the most common sites of distant metastasis.

- The possibility of malignancy is too rarely thought of in adenomatous tumors of the thyroid in patients of the fifth decade, and this possibility is not used often enough as an argument to urge operative treatment for these patients.

- A careful follow-up system should be used in all cases of questionable malignancy, and persisted in for at least ten years before the case is considered benign. [E. H. R.]

**GONOCOCCAL INFECTION OF THE KIDNEY AND CRITERIA FOR ITS DIAGNOSIS**

JOHNSON, F. P., AND HILL, J. H. (*Jour. of Urology*, Feb., 1924). A case of gonococcal infection of the kidney is reported; the organism was proved by fermentation tests to be the gonococcus. The criteria for the identification of the gonococcus have been discussed and the need of positive bacteriological proof in such cases emphasized. [B. D. W.]

**A PLAN OF MANAGEMENT OF CRANIAL INJURIES BASED ON A NEW GROUPING OF SUCH INJURIES**

RODMAN, J. S., AND NEUBAUER, B. B. (*Annals of Surgery*, April, 1924). Because of the confusion arising concerning the terms concussion, contusion, and compression of the brain, these authors have tried to formulate a simpler classification which would also form a working basis for treatment. They group their cases into three classes:

Group 1—No increase in intracranial tension.  
Group 2—Moderate increase in intracranial tension,

Group 3—Marked increase in intracranial tension. For the first two groups, treatment should consist in rest in bed, ice-cap to the head, sedatives as needed, possibly elevation of the head of the bed; and, in Group 2, spinal puncture with withdrawal of 10-25 c.c. of fluid, this to be based on the spinal pressure reading. They consider the use of the spinal pressure reading as of great importance.

They call 8-10 mm. of Hg. normal; anything above 10-18 mm. of Hg. moderate, and anything higher than 18 extreme elevation.

The third group with its high spinal pressure generally calls for operative treatment; the others rarely. [E. H. R.]

**EXOPHTHALMIC GOITRE RESULTING IN BLINDNESS FROM CORNEAL ULCERS**

HINTON, J. W. (*Annals of Surgery*, April, 1924). This author finds that corneal ulcers may develop at any stage in exophthalmic goitre. Local and general therapy have given very unsatisfactory results. Partial resection of the thyroid gland seems to offer the best chance of arresting corneal ulceration resulting from exophthalmic goitre. [E. H. R.]

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### PUBLIC HOSPITALS AND CHARITY

A THOUGHTFUL observer standing before the Out-Patient Department of one of our large hospitals would be impressed by the continuous stream of patients converging towards its doors. He would be struck not only by the number, but by the appearance of these people. The typical "poor man," the down-and-out victim of ill luck, is greatly in the minority. The average individual, in fact, approximates the average as met with in the subway, or in any proletarian gathering. Fur coats in season, "snappy" suits on the young men, are frequent. Some patients drive up in automobiles (often hired or borrowed, no doubt). If the observer were to enter the hospital and study the records of this throng, he would find that while most of them belonged to the wage-earning class, not a few were small tradesmen, builders, skilled mechanics, or even professional men.

Passing into the receiving hall, they are distributed among the various departments. No longer are the needs of the sick supplied by a simple medical or surgical department. Each Specialty has its clinic; on certain days are held special clinics for the treatment of obesity, diabetes, faulty posture, tuberculosis, and cardiac conditions. Every medical case has a Wasser-

mann test. X-Ray studies, electrocardiograms, cystoscopies, renal function tests, are resorted to whenever it is felt that they can be of any assistance. For these the patient pays an approximate cost price, varying from 50 cents to 5 dollars.

The significance of all this is fairly obvious. It means that the practice of medicine, if carried on according to modern scientific rules, demands at times far more co-operation and apparatus than the individual practitioner can command, unless his patient is sufficiently well-to-do to pay the fees of several specialists and laboratory men.

Another factor governing the steadily increasing number of hospital patients is the dissatisfaction with which many people regard the superficial type of medicine practised by some physicians as contrasted with the rather impressive thoroughness of a routine hospital examination. Those who have been through the latter with benefit spread this gospel among their friends. Avoidance of a consultation fee is not their object. There is also, we believe, a prejudice held by some patients in favor of a hospital doctor. He has no axe to grind. This prejudice is unwarranted, except in rare cases, but it does exist. The white coat of the hospital, in some eyes, constitutes a scientific halo.

The gradual development of the hospital from an institution where the very poor received a minimum amount of medical or surgical care to one where scientific medicine is practised upon practically all who apply, has both merits and disadvantages. The modern clinic, by checking up the general practitioner's diagnosis, provides him with constant post-graduate instruction. Too often he neglects this opportunity to keep in touch with progress, but there are some men who habitually follow up the cases they refer. It supplies a vast material for teaching medical students. It increases the public knowledge of scientific measures and prepares the soil for the great harvests of preventive medicine.

On the other hand, there is no doubt whatever but that the privilege of getting medical services for cost is greatly abused. Much dissatisfaction exists among the men on duty at the hospitals because of this. At times this feeling is justified; in other instances, the ability of the patient to pay for extensive studies is more apparent than real. Those who insist that the hospital is intended to serve only the poor must realize that poverty is relative; that the patient who is able to pay for services once considered adequate may not be able to afford the investigation which present day standards require.

The admitting officer, with a hundred new cases waiting for admission, has to decide hastily as to the financial standing of the person before him. He can exclude only those who are most obviously unfit. As a matter of fact, most instances of flagrant abuse of hospital charity

are those in which the patient bears a letter of reference from his doctor. Such a letter constitutes a sure card of admission, for the admitting officer must take the doctor's word that the patient is a fit subject for hospital treatment. This condition of affairs is the result of a fundamental misunderstanding between the practitioner and the specialist. Exaggerated reports of the fees charged by the latter, or perhaps some unfortunate experience with one of the gougers of the profession, cause the former to send all but his wealthy patients to a charity hospital. He should realize, and we can assure him that it is so, that competent services can be secured from the younger men—the very ones who do the hospital work—at a very moderate cost, provided the family doctor informs them of the financial status of the patient.

It is unfortunate, from many points of view, that medical charity should be abused. Let us have free use of every possible agency that will advance the public welfare, but not by pauperizing the patient and by stealing the doctor's services.

#### THE PROBLEM OF CANCER

On the whole, cancer is the most important medical problem of the day. Malaria is probably the most widespread and devastating disease known, but it can be successfully prevented and treated, that is, the knowledge of how to prevent and treat it is possessed. Plague is another extremely deadly disease. But neither malaria nor plague can rightly be described as diseases of civilization. Malaria exists, it is true, in civilized countries but to no great extent because it is prevented from doing so and plague is essentially a disease which only thrives in those countries in which the laws of sanitation and health, as understood in Western Europe and in North America, are set at defiance. Cancer seems to be eminently a disease of civilization, indeed some authorities go so far as to say that it flourishes only in human soil prepared for its reception by the habits of civilization, principally by diet. It is superfluous to insist that the question of cancer, even more than tuberculosis, is nowadays the one in which the general public equally almost with the medical profession are most deeply concerned and therefore the most recent pronouncements on the subject are read with avidity. In March last the *Canadian Practitioner*, Toronto, published a special cancer number to which Americans, Canadians, Englishmen and Frenchmen contributed. A considerable part of the issue is devoted to a consideration of radium and x-ray therapy, the majority of papers being written by that brilliant group of experts attached to the Cancer Memorial Hospital, New York. Dr. James Ewing, director of cancer research at that hospital, writes on the influence of radiation

therapy on the study of cancer, pointing out that irrespective of or rather in addition to the curative and remedial effects of this means of treatment it has opened the eyes of those using it to the biological and physiological peculiarities of tumors under radiation. He believes that the workers therein may be laying a foundation for the ultimate solution of the mysterious properties of the cancer cell. Dr. A. T. Ochsner gives his experience, which on the whole is favorable, of radium and x-ray treatment of cancer of the uterus, he has foreseen surgical treatment for cancer in this location except in the treatment of the disease in the body of the uterus when the actual cautery is used. It is impossible within the limits of an editorial to even attempt to summarize the papers by the Memorial Hospital group of contributors in the way they deserve to be dealt with. It must suffice to say that the papers of Drs. William S. Stone, Douglas Quick, Frederick M. Johnson, B. S. Barringer, Bunton Lee and William P. Healy are all excellent expositions of how to use radiation with the best prospects of success. Dr. Degrais of Paris, a pioneer of radium therapy, and associated in the early days of this form of treatment with Wickham of Paris, the pioneer, gives in collaboration with Dr. Anselme Bellot of Paris an illuminating article on the probable expectations of radium treatment of cancer of the cervix. Dr. Degrais, who is wisely conservative, concludes that in operable cases of this form of cancer ninety per cent are amenable to radium therapy which, with no risk, gives results which compared most favorably with those furnished by surgery. Dr. Frederick C. Harrison of Toronto deals with radium treatment of rodent ulcer and epithelioma in which he shows that remarkably good results may be obtained in the hands of an expert. The conclusions which may be drawn from the papers on radiation in the treatment of cancer are that in the early stage in suitable cases and in favorable locations this method of treatment yields good results when employed alone or as an adjunct to surgery. Of course in order to expect or to hope for a successful outcome from the employment of radiation early diagnosis is almost essential. Dr. H. M. Tovell of Toronto points out how great progress has been made in the early detection of cancer by the aid of x-ray examination. In fact it might not be too much to say that treatment in some cases is only rendered possible by x-ray examination. Several papers in this number were contributed by English authorities and four out of the six given discussed preventive treatment from the viewpoint that intestinal stasis is a very important factor in the causation of cancer. Sir Arbuthnot Lane in a paper reiterates the well known views that chronic intestinal stasis is a means of inducing cancer in two ways. First, the prolonged intestinal stasis brings about alimentary toxemia which poisons and devitalizes the system, lowering its powers

of resistance and rendering it a more or less ready prey to the attacks of disease. Second, this same stasis and toxemia by aiding in the formation of ulcers, by eroding the lining of the gastro-intestinal tract, by creating angulations provide foci of irritation by which cancer may be initiated and developed. It is allowed that continued irritation may excite into activity the cancerous process in those susceptible. Sir Arbuthnot Lane points out that the cancerous cell never grows in healthy tissue, but will only grow in a suitable soil, and that soil is provided for by the prolonged action of toxins in the tissues. It is argued as said before by many that cancer is a disease of civilization depending upon habits of life mainly on diet, and negative proof of a convincing nature appears to be afforded by the fact vouchered for by medical men and others who have spent much time among primitive people, that cancer very rarely attacks such people. Drs. A. C. Jordan, N. Mutch and W. Harold Chapple hold with and corroborate the view of Sir Arbuthnot Lane in able papers. Dr. Jordan from the standpoint of the radiologist Sir Lenthal Chealte contends that in spite of the manifest importance of irritation as an exciting factor in the causation of the disease, other matters must be taken into account, notably the importance of the nervous system in the study of changes in the biology of epithelium among the most important of which is carcinoma. One of the best papers is by Dr. J. Shaw Mackenzie, who for many years has been pursuing investigations as to the cause of cancer in King's College Laboratories, London. Those interested in the biological aspects of the cancer problem cannot fail to be edified by the suggestive paper of Dr. Mackenzie.

The cancer number of the *Canadian Practitioner* is an ambitious and successful attempt to assist in propagating the most recent views of certain phases of the cancer problem. It has a distinct educational value.

#### FISH AS ANTI-MOSQUITO AGENCIES

D. M. MOLLOY, of the Rockefeller Health Foundation, has recently reported some interesting work done in Nicaragua in the control of malaria (*American Journal of Tropical Medicine*, IV:175, 1924).

For years the natives of Barbados have been in the custom of keeping fish in their rain water barrels, and have noticed the absence, under these conditions, of "wiggle waggler," although they did not associate these organisms with mosquitos. The absence of mosquito larvae in swamps, ponds and streams of the island, moreover, has been demonstrated to be due to the presence of innumerable small fish called "millions."

W. P. Seal, in 1908, was the first to advocate the use of fish as antimosquito agents, using

Gambusia affinis and a still smaller variety, Heterandria formosa. Dr. H. H. Howard, however, in 1918 and 1919, first used fish as anti-mosquito agencies in a well directed campaign against malaria in Mississippi, employing Gambusia affinis.

In Nicaragua, in certain districts, waters have now been stocked with top-feeding viviparous minnows, called olomina, or more technically, Poecilia sphenops. As a result of this work, yellow fever, already on the decline, has disappeared entirely, and a decided reduction in the malaria rate has occurred.

#### QUARTERLY BULLETIN OF THE VERMONT STATE MEDICAL SOCIETY

THIS Bulletin of April, 1924, contains three important papers: One by Milton J. Rosenan, M. D., on Food Poisoning, in which the definition and classification of food poisonings are clearly set forth together with all the etiological and therapeutic problems involved; another paper by T. S. Brown, M. D., on the Surgical Anatomy of the Bones with Especial Reference to the Problems Encountered in Dealing with Fractures, which is followed by a paper by Charles F. Painter, M. D., on Fractures of Long Bones and Pelvis. These subjects are all scientifically treated by the authors and the practical application of accurate knowledge is clearly set forth.

These papers are worthy of careful study by general practitioners for the information therein contained should be at the command of every doctor who may be called upon to meet emergencies.

#### MRS. JESSICA HENDERSON VERSUS PRESIDENT COOLIDGE

ACCORDING to newspaper reports Mrs. Henderson has sent a communication to President Coolidge, in which she refers to "vaccination tragedies and failures" and protests the unlimited police power of boards of health. She asks the President to put a stop to the activities of these boards. She warns the President that if he fails to pay attention to the subject of vaccination, with the implied suggestion that he should ally himself with the League, the proponents of the American Medical Liberty League will make a *campaign issue* on vaccination and carry it to the polls.

We have always felt sorry for Mrs. Henderson who, aside from her mistaken beliefs, is a worthy and kindly person. She is energetic, magnetic and consecrated to her beliefs. This threat is suggestive of a mind unbalanced by over-enthusiastic activity in advocacy of an erroneous conviction.

Real men are not won over to a particular cause by a political threat.

## MISCELLANY

## THE COMMUNITY HEALTH ASSOCIATION

THE annual meeting on April 21st of the Community Health Association (Boston) was characterized by simple dignity and the omission of attempted display. The speakers focussed their addresses on the value to the community of the nurse and social worker.

The president, Mr. William Arthur Dupee, welcomed the company that filled the hall of the John Hancock building, referred to the difficulties in merging two active associations, which process is under way, announced that the program was never clearer than it is today, and stated the work of the association to be a demonstration, on the basis of which it will be imperative for the city of Boston to take it up, continue it and develop it. It is the biggest piece of health work in Boston and there are more persons on its books than on those of any two of the hospitals in the city. Its budget makes necessary the raising of \$250,000 the present year, and the speaker said impressively, "But we are going to do it." It is an unusual undertaking for voluntary association in point of magnitude, but the association is carrying it with the full realization that with an increased popular appreciation of its value, it cannot fail to become a governmental duty of the city. "It is everybody's concern."

Miss Mary Beard, R. N., general director of the association, spoke quite at length on the organization and its accomplishments. It has now been shown that the merging of the two original societies, the Instructive District Nursing Association and the Baby Hygiene Association, is well worth while. The problems of the year included the co-ordination of the work of the two earlier organizations, the improvement of working conditions and the adoption of generalized nursing in place of the former specialized work. Then again an analysis has been made with the view of effecting an economical administration of the whole great work.

Certain portions of the previous program will be omitted, including visits to mothers to persuade them to send their babies to clinics, and to an extent the special nutrition workers, with some reduction in supervision. The results will not be impaired by these changes for the clinics are now almost over crowded, while the training of the generalized nurse will cover nutrition and also portions of the previous work in supervision. These changes have been made advisedly and are in the interests of economy and to avoid duplication of effort. How necessary such economy is may be judged from the number of visits made by the nurses of the association, 439,692 in the past year. The efficiency of the work is to be increased first through the interest

of the family, whereby each family served pays in part, at least, for the service, and by closer co-ordination with the Health Department of the City of Boston.

Dr. Haven Emerson, the principal speaker, outlined first the progress of public health in this country and then gave an evaluation of community health service with some emphasis on the community chest. He said that there are in progress a good many experiments in community service over the country, but no other voluntary agency has had the courage to go so far in its service as the Boston association. Such an institution, usually classed as a welfare association, may truly be called a public health association, and its foundation is the visit to the home with accompanying service to the sick and its education in the principles of health. The reason that it is bound to be successful is that it takes the whole community to reectify its own ills. "It is of little use to have a sound body," said the speaker, "when the mind is incapable." He then drew a comparison between the human body and community, noting that in the last analysis personal health is the foundation of public health.

Just as the human body must be examined for sickness so one must seek the causes of "sickness" in the community. We find that the causes often lie within the family and neither control of the environment nor a general policy will bring health heaven to the people.

Dr. Emerson noted that in the city no person or family exists which fails to have its influence on its neighbors. There are now 171 municipal organizations in the country which have undertaken community health work. He spoke of the advantages of community work and took occasion to enter a plea for the community chest, which has helped bring about this betterment in work.

The speaker then sketched the history of public health work in this country. In 1689 the port authorities of Boston, through the quarantine of vessels on board which were cases of communicable disease, established the principle that no individual could interfere with public safeguards for the health of the people. For two hundred years the policy of sanitation through "police methods" had sway. It was an exercise of authority by the officials and in this there was little share taken by any outside the department. In 1900 there began practically the movement of "prevention." Much disease is preventable, curable, communicable. The immediate thought is then, "Why not cure, stop communication and prevent?" For twenty years this policy prevailed as the dominant one till in 1922 the action of the American Medical Association and of the National Public Health Council advocated the medical examination of healthy persons. This is the aspect today, namely, that public health is purely a private

affair. It is not a tax payers' question but a personal one. The work we are now engaged in will make each individual a participant, and is not to be handed as a whole to a public department.

The speaker then turned to the development of the theme of individual and family relationships to public health. He referred to the period in every communicable disease when preventive measures will prevail, and to that later time when no care will save. Here the value of social work in the family is self-evident. He spoke of the increase in the span of life from 40 years to 50, but presented the modern view of looking at a health rate rather than at a death rate. "It is hard to warm up to a mortality rate," he said, "we should talk in terms of continuity and endurance."

Man's length of life not so long ago was in Massachusetts about 40 years, in 1920 it had been increased to 55, "a real accomplishment." There is economy in longer life. One of these is the raising of families of children ready to work and with mature bodies and minds before the passing on of their parents. "The most important work of public health in 60 years," said Dr. Emerson, "has been the creation of grandparents," here referring to the increased number of families with living grandparents. We are pleased with our 50 years of life, but New Zealand rises to 65, and at best there is a narrow margin of safety. Some countries have been swept back by the war. In Russia the span of life is 28 years and in India 26 to 27.

The plans now under way are likely to "sweep into the discard" much of the program of today. We are beginning to think, not in terms of infant mortality but in terms of the family. We are beginning to realize that a community health organization tries to provide material for a continual war on disease. There are important inter-relations. Seventy-five per cent of financial dependence is because of sickness, and it is economy to reduce the amount of the latter. The health association is the conscience of the community, the cabinet of the unofficial health government of the city, supplementing official effort with non-partisan work.

Speaking of proper procedure, Dr. Emerson stated that "no official government of any city has studied the real needs and condition of the people, and undertaken a program based on such knowledge." On account of changing heads health departments suffer. They should be continued on a definite policy as are sewer or fire departments. Municipal health advancement has, therefore, been left largely to the devotion of individual health officers helped by private agencies. So long as we have untrained city health heads succeeding one another, we must depend on the private agency.

After summing up some of the needs of communities in point of equipment, with a word or

two about those departments which gloat over the paternal health incompetence of their systems, and some hints about services that are essential, Dr. Emerson asserted that health service must really in the end be the work of the family. "What is done will be appreciated in proportion to what is paid for it, and the value of the work will cause it to be spread by satisfied customers."

#### NEW DIGEST OF HEALTH LAWS

THE Health Department of Boston has just issued a most valuable contribution to municipal literature in the form of a 344-page Digest of Health Laws, affecting the citizens of Boston. It comprises the statutes, special legislation affecting the City of Boston, rules and regulations of the Health Department, and the ordinances of the City of Boston relative thereto. It is the first similar manual published in twenty years and the tenth since 1801. It is entirely new in its composition, in that the manner in which it is arranged does not follow or pattern previous publications. It is larger, more comprehensive, and contains all health legislation, reference notations, and court decisions which are in effect at the present time in Boston and Massachusetts. To make this a complete and exact copy of the laws and regulations, it was necessary to search every annual report since the Health Department was first organized, and go over carefully every record book containing the official minutes of the meetings of the Board of Health and Health Department, as well as to examine the various sources of legislative authority for health administration, since the organization. Nothing, except the statutes in the General Laws, 1921, was taken for granted in previous volumes of similar compilations, and nothing, therefore, was handed down to be recopied. Every marginal notation has had careful verification, and every court decision indicated has been examined.

The volume contains a preface in which the Health Commissioner, Dr. Francis X. Mahoney, offers the reason for the publication, and the Secretary, Stephen L. Maloney, certifies to the authenticity and effect of the laws, ordinances and rules and regulations which it contains. Following the preface is a list of the earlier publications of health laws, and the like, since 1801, and a general table of contents. The Volume is divided into five Parts. Each Part is a separate digest in itself, in that the laws and regulations, for instance, affecting food and food establishments, are in one Part so that it is an easy matter for anyone to find, with the aid of the index to chapters at the beginning of each Part, any of the laws or regulations for which he may be searching.

The work of collecting and compiling the data contained in this Digest has covered several

years, in a gradual manner, but outside of the printing and binding expense, finally, no specially appropriated funds have been expended on its compilation or editing. All of the work of the compilation was done in the office of the Secretary and under his jurisdiction, and the completed volume is a credit to those who participated in its completion. Many attempts have been made in the past few years to have this work concluded, but each succeeding year, until 1923, found it still unfinished. With the co-operation of His Honor, the Mayor of Boston, an appropriation was obtained in 1923 to have the compiled volume printed and properly bound. It has been decided to limit the edition at this time, and to charge a nominal fee of \$2.00 to help defray the cost of printing and binding. All requests, so long as the supply lasts, will be honored upon the payment of the prescribed fee, and an accounting of the money thus received will be made to the City Treasurer by the Secretary.

In determining upon the best manner to present this Digest, to insure its best adaptability to the needs of the Health Department, particularly, considerable profit has been derived through experience gained in research for laws in previous similar publications. For instance, the last manual of its kind, printed in 1904, contained all laws of whatever nature as they consecutively appeared in the revision of General Laws of the Commonwealth, of 1902, with reference to public health administration. No attention was apparently paid to associating together, in separate, distinct chapters, those health laws which had especial significance with respect to the separate aspects of public health administration. For example, no attempt was made to bring together all laws pertaining to sanitation, and to separate these from laws pertaining to food inspection, or to medicine, or the like. While this 1904 manual served its purpose, it seems that such an arrangement as in the present Digest, is necessary, because the functions of the municipal health department separate themselves naturally and logically into three groups: Food, Sanitation and Medicine. During the years that the Health Department has been in operation, there have been promulgated from time to time a considerable number of orders and regulations each having their special relation to these three general functions of Health Department administration, and the examination of the official record books of the Department, as indicated above, was with the view to associating these regulations in the separate parts of the Digest to which they especially related. The completed Digest, therefore, took the following forms: Part I, the Health Commissioner, with twenty-six separate sections in one chapter; Part II, Medical Inspection, with eight separate chapters; Part III, Vital Statistics,—Burial Records and Interments, with six

separate chapters; Part IV, Sanitary Inspection, with eleven separate chapters; and Part V, Food Inspection, with seventeen separate chapters. There is no general comprehensive index, but the general table of contents shows the pages on which each entire Part and each chapter in each Part is found. At the beginning of each chapter, there is a brief description of the subject matter of each section in each chapter, such sections being consecutively numbered. This brief description is worded exactly the same as the heading just before each numbered section in the chapter. When it is considered that in the 1904 Manual there was one page of index reference to every two pages of general law, ordinance or regulation citation or reference, it is easily conceivable that a general index for the present 1923 Digest of Health Laws would be proportionately larger, if used, and contribute to making the Digest rather bulky, because the latter Digest contains nearly two and a half times as many pages of general law, ordinance or regulation citation or reference as the 1904 manual.

Each section in each chapter, throughout the 1923 Digest, contains complete marginal notations showing previous enactments, and citations to Supreme Court decisions, and where elucidation seemed necessary, supplementary notes or cross references are indicated. Again at the end of each chapter, where further elucidation seemed advisable, there is a general Reference paragraph, each separate reference being related by the number corresponding to the sections in the chapter to which it is directly applicable. These general references are in some instances merely historical, or statements of health procedure, or they are judicial observations, or special statutory indications of significance.

A further dissembling of the various laws, ordinances and regulations in each chapter was undertaken in those instances where several items of significance were grouped together in one original section of the law or regulation. These larger original sections were dissembled, logically and consecutively, and the several items or parts, separated, and each was given a suitable heading under its appropriate original citation. This appears throughout the entire volume, and it is believed that this very painstaking and careful separation of the items in original references, together with the special arrangement of the various parts and chapters, the grouping of relating laws and resultant regulations and orders, the brief descriptions of contents at the beginning of each chapter and part, serve admirably to offset whatever advantages might be gained from a general comprehensive index. Moreover, it is certain that the Digest would have assumed much larger proportions if a general index were attempted, because the scope and character of the informa-

tion contained to be properly indexed in a general way would require so many references and cross references, as to increase the cost of publication. The publication cost in the neighborhood of \$3000, yet no additional appropriation for the clerical or other services was required, because such other services were rendered by the Health Department personnel, the work being done in the office of the Secretary. This feature of the publication is of considerable significance when it is recalled that the previous publications of a similar nature were especially appropriated for before they were started, and cost the City a larger amount of money in proportion to the size and character of the volumes and the kind and amount of information contained in them.

The Digest will be sold to other than officials of the Governmental agencies, to whom will be distributed free copies, at a minimum cost of \$2.00 each, to help defray the cost of publication, so that the City will be reimbursed to a large extent for the actual printing. The Digest is of great value as a contribution to city documents, it is of extreme importance to the Health Department in its administration of public health activities, and it is certain that the time and effort spent in its completion was time and effort well and profitably spent.

To complete this book and issue it in its present form, represents much research, editing and real hard and tedious work. Credit for the compilation should be given to the Secretary of the Health Department, Stephen L. Maloney, Inspector Denis D. Johnson, and assistants in the Secretary's office. Dr. Mahoney takes especial pride in the work, but states that through the efforts of the Mayor the publication was made possible.

#### BOSTON MEDICAL HISTORY CLUB

At the Annual Meeting held at the Boston Medical Library on Monday, April 21, the secretary reported that the club now had over 100 members and that during the past winter seven meetings had been held. The treasurer's report showed a satisfactory balance. Officers were elected as follows; President, Dr. Joseph W. Courtney; Vice-President, Dr. John W. Cummin; Secretary-Treasurer, Dr. Henry Viets; Curator, Mr. James F. Ballard; Council, Dr. John W. Farlow and Dr. Frederick T. Lewis. Dr. John Donley of Providence read "A Note on the Experimental Neurology of Galen." He noted Galen's amazing industry in bringing together all earlier medical knowledge, which, with his own inherent talent for writing and investigation, gave him a pre-eminence lasting twelve centuries, never equalled before or since by any one man. He then discussed the actual knowledge of the brain and nervous system which Galen had inherited from his predeces-

sors and showed that roughly it amounted to a knowledge of the ventricles, convolutions and peripheral system. Galen, the lover of truth and careful observer, had, also like the true Greek he was, a speculative side. This latter was medieval and in keeping with his epoch while his experimental work was modern and was carried on down to our age by Vesalius, Harvey and others. To him anatomy meant physiological anatomy and the study of structures included a study of their functions and uses. As an example of the medieval aspect Dr. Donley then read his own translation of a part of "De Usu Partium" in which Galen speculates upon the reasons for two ventricles and for double organs in general. He then showed Galen, the born investigator, by reading his translation of Galen's exact account of his work in proving that the urine was secreted by the kidneys, and carried to the bladder by the ureters, a most logical and convincing series of experiments. Galen's studies and ideas on nerve force and his arguments for the brain as the center of life, as against Aristotle's theory of the heart as the source, were then described together with an account of his instructions for, and observations on, section of the spinal cord at different levels and at various angles, and his conclusions as to the innervation of the larynx, tongue and muscles of respiration, all of which show a marvellous intuition and an understanding of his subject far beyond his age.

Dr. Henry Viets spoke briefly on "A Fifteenth Century Medical Library," which belonged to Nicolaus Cusanus (1401-1450) an outstanding student of all the sciences who lived in the little village of Cues on the Moselle. He studied at Heidelberg, in Holland, at Padua and Cologne and as a Cardinal travelled extensively all over Europe and so had unusual opportunities to collect writings. At Cues he founded a hospital, in which is now housed his entire library, containing over 300 manuscripts on history, geography, philosophy, astronomy, medicine and other subjects. There are 17 volumes on medicine, which include three of Hippocrates and two of Galen, two of Rhazes, Albuscasis, Avicenna, Averroës, Isaac, Mesue, and the Byzantine writer, Theophilus. The only contemporary authors are Bernard of Gordon and Gilbertus Anglicus. The former in his "Lilium Medicinae" gives an excellent idea of the Medical School of Montpellier in 1300, and his manuscript has to do with contagious diseases and contains the first account of a truss for hernia, and the first mention of spectacles. Gilbertus Anglicus is represented by three manuscript copies of his "Compendium" which was a book required by medical schools of the times. Analysis of this collection, which may be considered as representative of the 15th century, shows the interesting fact that more than half the authors, even though translated into Latin

or other languages, are of the Eastern or Arabic School.

Sir D'Arcy Power, Surgeon and Lecturer in Surgery to St. Bartholomew's Hospital, gave a delightful informal talk on the history of this famous hospital which, since its foundation in 1123, over eight hundred years ago, has never closed its doors. He touched upon its founding, its early administration and vicissitudes, its patients and its staff which includes the well-known names of Harvey, Pott, Abernethy and Paget.

The next meeting of the club will take place in November.

#### THE MAINE EYE AND EAR INFIRMARY

The object of this Corporation, as stated in its constitution, is for "the establishment and maintenance of an infirmary in Portland, Maine, where a daily clinic may be held for the treatment, free of charge, of poor persons throughout the State suffering from diseases of the eye and ear." This institution was founded and managed by Erastus Eugene Holt, M. D., an executive surgeon, for thirty-five years.

After the Corporation was completed Dr. Holt tried to secure location for it on a part of the land controlled by the Maine General Hospital on Congress Street. This request was not granted and a location was secured in a house opposite Lincoln Park, which was remodelled and an addition built providing rooms for its in-patients and an out-patient service. After several years the necessity for larger quarters led to another request for space on the Maine General Hospital grounds which was again refused and the new building was erected on the corner of Bramhall and Congress Streets.

In the report of the Portland Community Council appears a plan in which it is recommended that the present property of the infirmary be sold and the proceeds be applied to remodelling the east wing of the Maine General Hospital, thereby providing thirty-five beds for in-patients of the infirmary and transferring the out-patient service to the Edward Mason Dispensary on India Street, a mile and a half away.

Dr. Holt has published in the Portland Evening Express and Advertiser a vigorous protest against this plan for good faith with those who have given funds which have made possible the development of the present infirmary obligates the management to keep the present plant in operation and the use of the Mason Dispensary which is not likely to be kept in operation is not feasible and further, that the separation of the work of the infirmary into two widely divided units would be a serious hardship for many patients and inconvenience to the surgeons.

Dr. Holt was the first regular house surgeon of the Maine General Hospital, beginning in 1875, and in addition to the work of his spe-

cialty has served as Superintendent of the Eye and Ear Infirmary.

#### GOVERNMENT EXTENDS MEDICAL WORK

It costs more to operate the U. S. Marine Hospitals than it used to, according to a statement made by Surgeon General Hugh S. Cumming of the U. S. Public Health Service. There are three times as many patients as there were in 1913, and hospital care costs about twice as much.

Our country is growing, the population is increasing, and the tonnage of the American Merchant Marine swelled from 11,893,437 tons in 1914 to 28,886,212 in 1922. More merchant seamen apply to the Marine Hospitals for treatment. The U. S. Coast Guard alone required 41,681 hospital relief days and 32,530 out-patient treatments last year from the Public Health Service, which in addition detailed medical officers aboard all the cruising cutters and furnished 97 contract physicians to serve the life-saving stations remote from Marine Hospitals and out-patient offices.

New classes of beneficiaries have also been added in recent years. The Employees' Compensation Commission, whose first patients were admitted to Marine Hospitals in 1916, required 26,722 hospital relief days, 91,144 out-patient treatments, and 12,288 physical examinations in 1923. The Commission furnishes one-sixth of all Marine Hospital patients and one-third of the dispensary patients. The value of these medical services has been estimated by the Employees' Compensation Commission as more than \$1,000,000 annually. In 1921, all lepers in the United States became beneficiaries of the Public Health Service. Last year 66,736 hospital relief days were given at the National Leper Home (U. S. Marine Hospital No. 66), Carville, Louisiana, a station which alone costs over \$273,000 per year to operate. Immigrants detained for sickness or observation required 122,480 hospital relief days last year, 11,669 such patients being treated, chiefly at the Marine Hospital, Ellis Island, New York, a station whose operation in 1923 cost more than \$500,000.

Dr. Cumming alluded to statistics published by the Bureau of Labor, which show that the price level of major necessities averaged 70% higher than in 1913 and stated that the improved standards of living now prevailing also reflect themselves in every detail of hospital management, including the wages of personnel. The employment of trained female nurses alone adds approximately \$500,000 annually to the operating costs of Marine Hospitals, which are, however, lower than those of civilian hospitals providing the same character of service. The per diem cost per patient in 1923 was \$4.08, which includes all salaries of surgeons, regular and special nurses, and other personnel, food

for patients and attendants, light, heat and power, repairs to buildings, and some items not included by private hospitals in their cost reckoning. That other hospitals have had a similar financial experience is evidenced by the fact that the majority of civil institutions show an increase of approximately 100% in their operating costs of pre-war days.

#### MEETING OF CLINICAL STAFF OF THE BOSTON DISPENSARY

At the May meeting of the Clinical Staff of The Boston Dispensary held on Tuesday, April 22nd, 1924, Miss Ruth V. Emerson, Chief Clinic Executive and Head of the Social Service Department, presented several case histories illustrating the general topic

"The place of Social Case work in its relation to Medical Case work."

Miss Emerson outlined the development of Medical Social Service in Hospitals and Out-patient Departments and showed by illustrative cases how it falls upon the Social Worker to devise means by which the patient may be enabled to carry out the Doctor's prescription.

Following Miss Emerson's address, Drs. Edward O. Otis, Hilbert F. Day, William E. Preble, Lesley H. Spooner and John D. Adams took part in an interesting discussion. The gist of the discussion was that whereas even as late as a dozen years ago the Doctors in Hospitals and Dispensaries did not see the need of the employment of Medical Social Workers, now they do not see how they can get along without them.

At the opening of the meeting, the Director of the Dispensary, Mr. Frank E. Wing, explained in detail certain changes in the Record System which have been introduced as a result of the intensive study and recommendations made by the Committee on Records, consisting of Drs. A. K. Paine, Elmer W. Barron, Henry J. Perry, Harry J. Inglin and Willard S. Parker.

#### WHAT NEXT?

THE Jamestown, N. Y., *Journal* gives details of a hearing before the City Board of Public Welfare, at which several chiropractors demanded the right to send patients to the City Hospital and to treat any there desiring chiropractic treatment. For two hours the back-breakers argued with the Board and health officials when it was finally decided that the Board should obtain legal advice on the matter. According to Attorney George W. Whiteside, counsel of the State Medical Society, there was no question but that chiropractors who practiced what they are pleased and accustomed to call their profession (!) are doing so in violation of the laws of the State. Chiropractic, he says, is scientifically unsound and should be fought as a plague, and its practice a crime which no political expediency can condone. The lack of sense

of fitness of this is easy to understand, but not how they could hold the attention of the Board for two hours.

S. S.—Since the above, the opinion of the Jamestown Corporation Counsel, Mr. Cawcroft, has been given which goes to say: "The City Hospital is the creation of the Charter and the general laws of the State. Those laws contemplate the admission of patients for medical treatment by licensed physicians and not by someone else." "If a chiropractor cannot give medical treatment," Mr. Cawcroft says, "the Board is not justified in admitting his patients or permitting them to remain on the premises. On the other hand, if the chiropractor asserts that he does give medical treatment, then the Board is in a position of permitting such chiropractor to violate the law on the premises under its control because it is a penal offense for anyone but a licensed physician to give medical treatment. The opinion appears to cover the legal points bearing on the question in a full and lucid manner."—*Buffalo Sanitary Bulletin*.

#### THE TRAGEDY OF QUACKERY AND PROCRASTINATION IN CANCER

The fear of the knife and the prevailing opinion that cancer is a hopeless condition are probably the two main reasons that quackery has profited so greatly in exploiting sufferers from cancer. Furthermore, while excellent results may be obtained in early cases of cancer, at the present time, many cancer patients learn of their disease only when their condition is far advanced and the chances for recovery poor. Scientific medicine must, in honesty, admit this, and must also admit that it does not possess a specific remedy against cancer. The quack, however, is either certain, or claims to be certain, that his remedy is sure cure for every cancer case. The patient takes a chance with the one who promises him most, and thus misses the opportunity to obtain the correct treatment in the early stages of the disease. All this is characteristic of human nature and applies as much to bucket shops as to cancer cures. The dupes in both cases are the ignorant and inexperienced; and the remedy in both cases is education. A secret remedy cures only the empty pocket of the quack.—*Bulletin N. Y. Department of Health*.

#### PUBLIC HEALTH NURSING SURVEY

THE National Organization for Public Health Nursing, in conjunction with state organizations and state associations of graduate nurses, is making a survey of the public health nursing resources of this country. The facts, when collected, will give a complete statistical summary of all organizations and nurses engaged in the various departments under this classification up to January 1, 1924.

### THE NEED

ONE newspaper is quoted as stating that the most important happening in this country last year was the birth of 2,000,000 children.

How many of them lived? This is not known accurately, because there remain eighteen states whose registration of births is so incomplete as to exclude them from the birth registration area. Of the thirty states in this country within the registration area, one child in every thirteen born dies during its first year. If the same ratio applies to the states whose birth registration is incomplete we have a total loss of 190,000 American children a year.

That is startling, but it is a long way from the day when parents were considered fortunate if they were able to bring up two out of every three of their children.

Still, it leaves us behind five other nations, including New Zealand, the best off of all countries which keep books on their greatest asset, which loses only one in twenty of its children during the first year.—*American Child Health Association.*

### PUERPERAL MORTALITY IN ENGLAND AND WALES

*The Medical Press and Circular* reports that it is the consensus of opinion in Great Britain that the puerperal mortality in England and Wales is unnecessarily high with the extremes in the sparsely and the densely populated districts. In a report to the ministry of health, Dr. Janet Campbell emphasizes the fact that large numbers of women are injured through lack of skillful treatment in childbirth. Her remedies consist in more efficient education of medical students, the more general employment of skilled midwives, larger provision for trained ante and post-natal care of pregnant women and an increased number of hospital beds for maternity cases.

Dr. Reginald Dudfield quotes statistics, however, showing that 55.2 per cent. of the mortality of pregnant and parturient women during 1911 and 1912 occurred in institutions but in the period 1918 to 1920 the percentage rose to 70.5.

No explanation is offered but it may be assumed that larger numbers of patients are sent to, or voluntarily seek, hospital care when it is evident that dangerous complications exist.

### BRITISH OPPOSITION TO OUR OPIUM POLICY

TREMENDOUS difficulties in the way of an international agreement to limit the production of opium and its derivatives to medical and scientific needs are apparent in the deliberations of the Opium Congress which adjourned March 10 to convene in Paris, at a later date, chiefly owing

to the position of the British delegate reflecting the views of India. It is particularly difficult in the case of India to submit to the international decision the intricate problem of internal consumption, and the British representative contended for limitation of the manufacture of derivative drugs by each country within its own borders.—*The Nation's Health.*

### JERSEY LAWYERS WOULD BAR ALIENISTS

The unreliability of expert testimony was the subject of discussion before the recent meeting of the New Jersey State Bar Association with the result that a committee was appointed to confer with a like committee representing the state medical society on measures calculated to eliminate unreliable expert testimony, especially with respect to a person's mental condition.—*The Nation's Health.*

### DAMAGES RECEIVED BEFORE BIRTH

JUDGE JAMES GORDON of Philadelphia has handed down a decision holding a child may sue and recover for damages received before it was born. The suit was brought by Israel Kein in the name of his daughter, Florence, against William Zuckerman. A month before birth the mother was seriously injured in an automobile accident, for which Zuckerman was held responsible. The child was born with a physical deformity supposedly the result of the accident.—*Buffalo Sanitary Bulletin.*

### U. S. VETERANS' BUREAU

With appropriate ceremony, U. S. Veterans' Hospital No. 95, Northampton, Massachusetts, will be officially opened on May 12, according to General Frank T. Hines, Director of the U. S. Veterans' Bureau.

Dr. A. H. Pierce, medical officer in charge of U. S. Veterans' Hospital No. 44, West Roxbury, Mass., has been selected as the Medical Officer in Charge of the new institution. He will be assisted by a personnel of approximately 250.

The hospital was constructed at a cost of more than \$2,000,000. The buildings are two and three stories high and are of fire-proof brick, tile and re-inforced concrete construction. Every modern appliance adapted to the treatment of neuro-psychiatric diseases have been installed in the institution.

National Hospital Day, the one hundred and fourth anniversary of the birth of Florence Nightingale, has been selected as the most fitting and appropriate occasion for the official opening of the new Veterans' Hospital, which will have facilities to care for four hundred and sixty-two patients. Director Frank T. Hines is expected to be present at the ceremony.

### JOHN HUNTER AND HIS PUPILS

In the obituary notices of Sir William Mac-  
wen, mention has been made of an address which  
he delivered as President of the British Medical  
Association in 1922 in which he alluded to the  
paucity of pupils who attended John Hunter's  
lectures. The story was told that on one occa-  
sion the class consisted of a solitary pupil, and  
that Hunter, in order to be able to commence  
with the word "Gentlemen," instructed the at-  
tendant to bring in the skeleton. Were it true,  
the anecdote would be a tribute to John Hunter's  
sense of humour; but not only is it un-  
authenticated, but no position was less likely to  
be viewed by him as fit subject for a joke. For  
he, like his brother William, was extremely sen-  
sitive to the lack of appreciation of himself, his  
discoveries, and his reasoned conclusions. The  
number of pupils who entered for John's lec-  
tures on surgery probably never exceeded sixty,  
and at one time was as low as twelve. By one  
of his contemporaries William Hunter was de-  
scribed as probably the best teacher of anatomy  
who ever lived; whereas his younger brother  
John, who in mental capacity towered above all  
his fellows, was confessedly laboured in speech,  
obscure in meaning, and constantly changing  
his opinions on the theory of disease. The mass  
of minor discoveries which he made was the re-  
sult of continued and unremitting thought,  
bringing daily some new idea into his mind, and  
altering his preconceived views and theories.  
It was on these grounds that his colleagues crit-  
icised his lectures as "physiological rather than  
chirurgical." His awkwardly expressed argu-  
ments, the outcome of deductive and inductive  
reasoning, of which they had no conception,  
were as much above the understanding as they  
were outside the appreciation of all but a few.  
But those few were sufficient for John Hunter's  
purpose. It has been calculated that from first  
to last his pupils aggregated one thousand, of  
whom Cline, Abernethy, and Astley Cooper  
handed down the wisdom of the master to a  
younger generation. John Hunter's underly-  
ing conception of the duty of a hospital surgeon  
was the education of his pupils for the ultimate  
good of mankind.—*The Medical Press.*

### NEW EXECUTIVE FOR NATIONAL HEALTH COUNCIL

DR. A. J. LANZA has been appointed execu-  
tive officer of the National Health Council. Dr.  
Lanza comes to this position, which is one of  
the most desirable in public health work in the  
country, after three years' absence in Australia  
where he assisted in the organization of the  
Commonwealth Health Department. Dr. Lanza  
was formerly an officer in the United States  
Public Health Service and during the war per-  
formed notable work in developing industrial  
hygiene in this country. He succeeds Dr. D. B.

Armstrong, who resigned on January first. Of-  
ficers of the Council for 1924 include Dr. Lee K.  
Frankel, Chairman; Dr. W. F. Snow, Vice-  
Chairman; James L. Fieser, Recording Secre-  
tary; and Dr. Linsky R. Williams, Treasurer.  
The National Health Council comprises the  
twelve leading national voluntary health agen-  
cies of the country, together with the United  
States Public Health Service and the United  
States Children's Bureau as conference mem-  
bers. Among numerous other activities, the  
Council is urging periodic health examinations  
for all persons, believing that if all the people  
would have such regular physical inventories  
and would profit by the medical and hygienic  
advice derived from them, twenty years could  
be added to the average length of life in this  
country during the next half century.

### MEDICAL LEGISLATION

Do you know how your candidates for the  
legislature feel on the subject of medical legis-  
lation? Get acquainted with them and find out  
what they know about the medical situation.  
Make it clear to them that the State has a right  
to fix the qualifications for the practice of the  
healing art and that we as regular practitioners  
of medicine do not care about the kind of treat-  
ment used and actually would oppose dictating  
any peculiar form of treatment, but we are in-  
terested in knowing that those who hold them-  
selves out to treat disease shall have a knowl-  
edge of the human body as obtained by such  
preliminary education as we now demand of our  
students who graduate from the medical depart-  
ment of Indiana University or any other recog-  
nized medical college.—*Indiana Medical Jour-  
nal.*

### CHARACTER BUILDING

THE future strength of a nation lies in its  
children, and this strength is largely dependent  
upon the physical and moral training of these  
same children. The boys and girls of today  
are the men and women of tomorrow, and in  
their hands is the future of the nation.

Boys can be made our most valuable asset or  
our greatest liability. They are the very cor-  
nerstone of society. The future manhood of  
every boy and his place in the world will depend  
in a large measure on what we make of him.

An honest, upright, decent, clean boy is not  
easily led into wrong-doing. Bad men come  
from bad beginnings in boyhood, and bad be-  
ginnings come from bad company. Most con-  
firmed criminals become such before they reach  
the age of twenty-one.

Boys respond quickly and willingly to good  
influences, but what most of them require to  
keep them from evil is an opportunity to be  
busy at some interesting occupation.—*Chicago  
Department of Health.*

## THE MEDICAL MOTOR POLICY

THE Medical General Insurance Association Limited, of London, issues a special policy for physicians at less than the usual rates, covering accidental damage, theft, fire, and accidents to assured and wife, and compensation for cost of his loss of fees through bodily injury, loss of rugs, coats, luggage, surgical instruments, etc.

This is logical for it is recognized that doctors are, on the average, better qualified than the majority of operators.

It would be to the advantage of the profession to create a mutual company for this purpose. If a group of doctors would organize a company of this sort it would be a success under proper management.

## NEWS ITEMS

## U. S. VETERANS BUREAU

GENERAL FRANK T. HINES, director of the U. S. Veterans Bureau, has announced the transfer of three physicians from the Medical Division to the Office Management Division as Medical Consultants. They are J. R. McDill, M. H. Allen and Robert F. Souther. With the exception of Dr. Allen, the physicians are officers of the reserve corps of the U. S. Public Health Service.

Dr. McDill is a graduate of Rush Medical College. He was made a Major of Medical Corps, in 1917, and served as chief of base hospital, 40th Division, Camp Kearny, later serving as Consultant in Reconstruction, Office of the Surgeon General of the Army. He was chief medical officer of the Federal Board for Rehabilitation of Disabled Soldiers with the rank of Assistant Surgeon General, U. S. Public Health Service, from where he was transferred to the Veterans Bureau.

The military service of Dr. Robert F. Souther started on July 28, 1916, in medical corps of the army. In August 22, 1919, he received his discharge with the rank of Major. He is a graduate of the Harvard Medical School, specializing in surgery. He is now an officer of the reserve corps, U. S. Public Health Service.

Dr. M. H. Allen, the only physician not in the reserve corps, received his education at the Columbia University, College of Physicians and Surgeons. He served in the world war with the Canadian Army Medical Corps as deputy assistant director of medical services overseas, with the military rank of Lieut. Colonel. In October 1919, he was demobilized from the Canadian service and accepted a commission with the Royal Army Medical Corps of the British Army as Lieut. Colonel and was detailed to the Army of Occupation in the Holy Land. He accepted his appointment with the U. S. Veterans Bureau in September 1922.

DR. CHARLES V. CHAPIN was recently honored by his friends, commemorating forty years of service as Superintendent of Health of the City of Providence, R. I.

Among other tributes that of Dr. William H. Welch is especially noteworthy as follows:

"He is today our foremost sanitarian, and no one is more deserving of tributes of respect and admiration from his colleagues and friends than he. Chapin's services and contributions to sanitary knowledge and practice have brought him distinguished reputation here and abroad. He has applied scientific principles in the administrative control of disease, and with keen and sound critical judgment has tested these principles by experience and not hesitated to follow wherever the light of truth led him. He has thus abandoned old paths and struck out new ones when necessary. He has been a leader and pioneer in the field of public health and not only Providence and Rhode Island but the whole country are his debtors."—*R. I. Medical Journal*.

THE POST GRADUATE COURSE of lectures conducted in Pittsfield have been well attended. The average number of physicians has been forty. Lectures were given as follows:

- Feb. 13. Wyman Whittemore, M. D.
- Feb. 20. Edwin H. Place, M. D.
- Feb. 27. Wyman Whittemore, M. D.
- Mar. 5. Frank H. Lahey, M. D.
- Mar. 12. Frank H. Lahey, M. D.
- Mar. 19. Frank H. Lahey, M. D.
- Mar. 26. Charles J. White, M. D.
- Apr. 2. Charles J. White, M. D.
- Apr. 9. Kenneth D. Blackfan, M. D.
- Apr. 16. Kenneth D. Blackfan, M. D.
- Apr. 23. Paul D. White, M. D.
- Apr. 30. Paul D. White, M. D.

HEALTH UNIT, 17 BLOSSOM ST.—The regular monthly meeting of the West End Neighborhood Conference was held at the Health Unit, Friday, April 25, 1924, at 3:30 P. M. Mr. Benjamin Hinds, Master of the Washington School, presided, and Miss Sophia B. Eastman, R. N., Assistant to the Director, Massachusetts Charitable Eye & Ear Infirmary, spoke on "The Massachusetts Charitable Eye and Ear Infirmary Out-Patient Department." Miss Eastman's paper was extremely interesting.

A CHIROPRACTOR CONVICTED.—E. J. DeLorme of 156 Main St., Spencer, was before the East Brookfield District Court on April 22 charged with practicing medicine, not being registered. He was found guilty and a fine of one hundred dollars was imposed. He appealed and furnished bail of one hundred dollars. The case is assigned for the second Monday in May. Evidence that he treated three persons was submitted.

DR. JAMES L. GAMBLE, of Boston, read a paper entitled *Alterations in the Acid Base Structure of the Blood Plasmas Producing Acidosis before the N. Y. Academy of Medicine May 1, 1924.*

DR. RICHARD P. STRONG has accepted the invitation tendered by Dr. Hamilton Rice to organize a medical expedition from Harvard University and will accompany Dr. Rice on his geographical exploration up the Amazon and Orinoco. Mrs. Strong and Mrs. Rice will also travel with the party.

#### REMOVALS

DR. BYRON E. HOWE's office address in Adams is now 2 Center Street.

DR. NOEL G. MONROE's office is now at 2 Hamilton St., Southbridge.

DR. DAVID G. LJUNGBERG has moved his office from 3 Irving St. to 29 Pearl St., Worcester.

DR. JOHN A. MACFADYEN now has his office at 29 Pearl St., Worcester.

DR. CHARLES J. LASERTE now has his office at 2 Gardner Place, Leominster.

DR. THOMAS R. DONOVAN's office is now at 42 Fox St., Fitchburg.

DR. C. PENNELL BAXTER has removed from Hyannis to San Diego, California, where he has an office in the Commonwealth Building.

DR. LEWIS F. BAKER's present address is the Burbank Hospital, Fitchburg, where he is superintendent.

DR. EDWARD V. KILLELEA has his office now at 20 Prichard St., Fitchburg.

DR. FRANCIS P. McCARTHY announces the removal of his office to 465 Beacon Street, Boston.

DR. LUCIA F. VICKERY announces her removal to 37 Greenough Avenue, Jamaica Plain.

DR. THOMAS H. LANMAN of Boston read a paper on April 28 before the Hartford Medical Society on "Surgery of Infancy and Childhood."

#### OBITUARIES

##### CHESTER IRVING FISHER, M. D.

DR. C. IRVING FISHER, who died at Lockport, N. Y., April 26, 1924, at the age of seventy-seven, had been superintendent of the State Hospital at Tewksbury,

following the B. F. Butler investigation in 1884, and also of the Presbyterian Hospital in New York.

The son of Cyrus and Caroline Gould Fisher, he was born at Canton, Mass., April 25, 1847. He studies at the State Normal School at Bridgewater, taught school for a time at Provincetown, graduated from Harvard Medical School in 1870 and became port physician at Boston. In 1878 he settled in private practice at Holbrook and was there when called to head the State Hospital in Tewksbury. In 1892 he resigned to accept the superintendency of the Presbyterian Hospital in New York where he stayed for twenty-two years. Following his resignation he was made a member of the board of directors of the hospital. He joined the Massachusetts Medical Society in 1873 and kept up his active membership until 1916, when his name was placed on the retired list.

Dr. Fisher is survived by his wife, one son and two daughters, one the wife of Professor Warren Wright of Smith College, the other the wife of Dr. William S. McCann of the Johns Hopkins Hospital, who has lately been appointed professor of medicine at the Rochester, N. Y., University Medical School, a position he will assume next fall.

#### A TRIBUTE TO DR. PHILIP CASTLEMAN

The greater Boston Medical Society composed of Jewish physicians practicing in greater Boston hereby extends to the relatives of Dr. Philip Castleman the great sympathy of its members at the untimely death of their fellow member.

Dr. Castleman was the founder of this society. A man of intense social feeling he saw with a clear vision that the Jewish physicians needed growth in skill, social usefulness and fellowship, and that this growth could be attained only through the breaking down of selfish exclusiveness. Though he met with ridicule and opposition, both open and concealed, he labored with enlightened zeal and tireless altruism. His spirit communicated its fervor to others; a small group met at first in a humble way; the group enlarged in members and grew in dignity and in importance. He lived to see the organization over which he presided expand until it included almost every Jewish physician of greater Boston. He saw its meetings become distinguished by presentations of scientific worth and importance. This organization is a monument to him and will honor his memory so long as it lasts.

Dr. Castleman was a man whose kindness extended to all his fellows. In recognition of this trait the greater Boston Medical Society has voted to institute the Philip Castleman Trust Fund out of its yearly income. This fund is to be expended in harmony with the character of the man whose name it bears—in the aid and relief of physicians in misfortune and for any other purpose aiming at the relief of suffering.

No evaluation of the life of Dr. Castleman would do him justice if it did not take into account his attainments as scientist and physician. As scientist he had gained the recognition of the municipality and of great institutions of medical learning. Occupying a vital position in the community his work had reached that perfection where it was beyond criticism and where its absolute reliability was accepted without question. As physician he gave of himself with the ardor, unselfishness and skill which is the highest tradition of his profession.

Dr. Philip Castleman has gone from us and the community which he served. Yet his works live, his spirit still stirs men to charity and good works, and his memory will be cherished by those who labored with him and those for whom he labored.

N. N. LEVIN, M. D.,  
President.

## CORRESPONDENCE

## LONDON LETTER

(Continued from last week)

It was stated that the year had been an exceedingly prosperous one for the London hospitals and the gap between income and expenditure was closing in a very satisfactory manner. In 1920, the gap was £33,000 (\$1,915,000); in 1922 it was reduced to £174,000 (\$870,000) although it is too early to give exact figures for 1923, it is clear already that the hospitals have done better still, and that the gap has been bridged. Of course, this does not mean that there is no need for further worry concerning the hospitals. It must be borne in mind that nearly all of them are dependent on voluntary charity and, moreover, they still have to keep up their income at a figure almost two and a half times more than it was before the war, and have constantly to be spending money on the latest improvements and extending their work, so as to keep pace with the needs of the patients and the developments of medical science. The business side of a hospital's administration is one which requires to be in capable hands. Good organization and co-operation between the hospitals in buying supplies and so on has never been a distinctive feature of the management of London hospitals. In this respect the provincial hospitals of this country compare very favorably with those of the metropolis. However, more efficient business methods have been introduced in London with correspondingly good results.

Tables included in the statistical reports showed what in directions the hospitals, taken as a whole, were developing their revenue. From this point of view the figures showed three things. 1. The increase in voluntary contributions in spite of post-war difficulties. 2. The growing importance of the contributions made by patients themselves, either directly or through mass contributions, and 3. The varying proportion in which the annual aggregate surplus or deficit is divided between different hospitals and even different groups of hospitals. As an example of the willingness, in fact, keenness of the rich business men here to aid the hospitals, that of Sir Harry Mallaby-Deeley may be cited. He recently offered that if the London Hospital could raise £10,000 (\$50,000) he would give the same sum. This was done. He has now issued a challenge to the Westminster Hospital that if the authorities there can raise £16,000 (\$80,000), between this date and June 20, he will give a similar sum.

Sir William Berry and his brother, Mr. T. Goumer Berry, are among the biggest newspaper proprietors in this country. Mr. T. Goumer Berry is the chairman of the Committee of Management of the Infants' Hospital, Vincent Square, London. This institution, the largest of its kind in Great Britain, is placed in an absolutely ideal situation for its purpose. It faces the largest open space in the metropolis, outside the parks and at the same time is on the verge of one of the most squalid and poverty stricken districts of London. As is usual in such circumstances, infants swarm, and the consequence is that although both the in patient and out patient departments are large and, on the whole, admirably equipped to capacity in both departments, is overstrained. Sir William and Mr. Goumer Berry are conducting, with the assistance of Dr. Eric Pritchard, the director appointed a year and a half ago, and his staff, a most vigorous campaign to raise the funds necessary to place the institution on a staple financial basis, and to provide the extension of the building so greatly needed. No efforts are being spared to make of this campaign a success. It may be added that Dr. Pritchard is one of the leading authorities on infants' and children's diseases, and

especially on the rearing of infants in this country. He was the pioneer in Great Britain of the infant welfare movement. Under his direction there had been developed at the Infants' Hospital postgraduate classes, at which not only are the diseases of infants demonstrated and instruction in treatment given thereon, but the best means of bringing up infants is taught by Dr. Pritchard himself and an able staff of women and men physicians and surgeons and nurses. Among the women physicians attached to the institution is Dr. Helen MacKay, who did a great deal of original clinical and research work on rickets in Vienna during the latter part of the war and after. As a postgraduate centre for instruction in the diseases of infants and in infant welfare work the Infants' Hospital, London, is extremely well adapted in every respect and is convenient for Americans who wish for an insight into English methods.

Of the books published recently in London, two of the most readable are written by women members of the profession, both of whom are famous in their spheres of work. Dr. Mary Scharlieb's book, "Reminiscences," published by Williams and Norgate, London, is a record of the life of our best known and oldest woman surgeon. Dr. Scharlieb, née Bird, was born in London in 1845, and in 1865 married Mr. Scharlieb, a barrister, and went out to India. In 1871 she studied midwifery in the Anglo-Indian hospitals, and in 1877 secured a licence to practise from the Madras Medical College. In 1878 she returned to London to complete her studies, and in 1883 took the M. B. of the University of London. In 1887, owing to ill-health, she left India for good, and in the following year was the first woman to obtain the London University M. D. Since that time Mrs. Scharlieb has been in active and successful consulting practice in London. Mrs. Scharlieb was a pioneer in India, and her description of her work in that country enchains one's attention.

The other book is also by a famous woman surgeon who, in her short life, has had wonderfully chequered and exciting experiences. The book in question is by Dr. A. Louise McIlroy. Its title is "From a Balcony on the Bosphorus," and it does not deal with surgical or medical matters. Dr. McIlroy, who is a distinguished graduate in Medicine and Surgery of Glasgow University, served throughout the war. At first she was in the Scottish Women's Medical Unit in France, then with the same unit in the Balkan States, was in the disastrous Serbian Retreat, often surgeon-in-charge of the Scottish Women's Hospital in Salonika, and finally, when the Armistice had been signed, and during the occupation of Constantinople by allied troops for a year, was head of a hospital in that city. At the present time Dr. McIlroy is director of the gynaecological and obstetrical units of the University of London, Royal Free Hospital, London, and Professor of Obstetrics at the University of London. As said before, Dr. McIlroy's book is not concerned with medicine, surgery or politics, but is a charming personal narrative of her impressions of Constantinople. It represents the viewpoint of a highly observant cultured woman, and is written in charming literary style. It upsets once more the long held tradition that the possession of deep scientific knowledge is incompatible with shrewd observation coupled with a light but sure true literary touch. Yet another book well worthy of notice which has been published here recently is the second edition of Dr. H. Wansey Bayly's, "Venereal Disease, Its Prevention, Symptoms, and Treatment." (T. & A. Churchill, London.) This edition has several points to recommend it. Not only is it inexpensive, probably the cheapest book on the subject on the market, but although it deals comprehensively with the entire venereal problem it is extremely concise. The avowed object of the author to produce a book containing all the essential knowl-

edge and which, at the same time, will only entail a very reasonable call upon the time or pocketbook of the student or general practitioner seems to have been achieved in a very satisfactory manner. The last book to be referred to is a small book on insulin in general practice written by Dr. A. Clarke Beeg of Swansea and published by Wm. Heinemann, Ltd., London. The aim of this book is to fill a much needed want, that of providing a concise clinical guide for practitioners. It is such a guide.

AMERICAN MEDICAL ASSOCIATION

COUNCIL OF PHARMACY AND CHEMISTRY

*Editor* BOSTON MEDICAL & SURGICAL JOURNAL:

In addition to the articles enumerated in our letter on March 27th, the following have been accepted:

ABBOTT LABORATORIES

Procaine-Epinephrine Ampules, 1 Cc. (Abbott)

ARMOUR AND COMPANY

Anterior Pituitary Tablets, 2 grains (Armour)

Pituitary Tablets, 2 grains (Armour)

Parathyroid Tablets, 1/10 grain (Armour)

LEHN AND FINK

Sagrotan

ELI LILLY AND COMPANY

Iletin (Insulin-Lilly) U-40

A. LUMIERE LABORATORIES

Cryogenine

MALLINCKRODT CHEMICAL WORKS

Neoarsphenamine-Mallinckrodt, 0.15 Gm. Ampules

Neoarsphenamine-Mallinckrodt, 0.3 Gm. Ampules

Neoarsphenamine-Mallinckrodt, 0.45 Gm. Ampules

Neoarsphenamine-Mallinckrodt, 0.6 Gm. Ampules

Neoarsphenamine-Mallinckrodt, 0.75 Gm. Ampules

Neoarsphenamine-Mallinckrodt, 0.9 Gm. Ampules

Neoarsphenamine-Mallinckrodt, 1.5 Gm. Ampules

PARKE, DAVIS AND COMPANY

Pituitrin "S" (Surgical)

Ampules Pituitrin "S" (Surgical), 1 Cc.

WELTY COMPANY

Deodorized Kerosene-Welty

WILSON LABORATORIES

Desiccated Parathyroid Substance-Wilson

Tablets Desiccated Parathyroid Substance-Wilson, 1/20 grain

Tablets Desiccated Parathyroid Substance-Wilson, 1/10 grain

Yours truly 1/10 grain

W. A. PUCKNER,

Secretary,

COUNCIL ON PHARMACY AND CHEMISTRY.

BERKSHIRE DISTRICT MEDICAL SOCIETY

Pittsfield, Mass., April 26, 1924.

BOSTON MEDICAL & SURGICAL JOURNAL, Boston, Mass.:

In the evening of April 24th the Berkshire District held its annual meeting at the Park Club rooms in Pittsfield. After the election of officers Dr. Monroe (Dr. W. M. Monroe) told of a case now under his care who is suffering with Pellagra. This was followed by a most instructive and interesting talk by J. Dellinger Barney, M. D., on "Modern Genito-urinary Surgery." He showed numerous lantern slides which were unusually instructive.

The following officers were elected:-

President: J. A. Sullivan.

Vice-Pres.: N. Finkelstein.

Treasurer: C. T. Leslie.

Secretary: A. P. Merrill.

Com. Trials: P. J. Sullivan.

Councillor S. N. C.: C. S. Chapin.

Alternate: A. P. Merrill.

Councillors: J. A. Sullivan, H. Colt, C. S. Chapin.

A. P. Merrill and B. W. Paddock.

Censors: H. Colt, Supervisor, M. M. Brown, A. C. England, P. J. Sullivan and M. A. Walker, Jr. Comm. of Arrangements: M. Eisner and J. C. Roe. Nominating Committee: J. B. Thomas and I. S. F. Dodd.

Yours very truly,

A. B. MERRILL,

Secretary.

NOTICES

FIRST DISTRICT—UNITED STATES CIVIL SERVICE EXAMINATIONS (PHYSICIAN) RECEIPT OF APPLICATIONS TO CLOSE JUNE 30, 1924

From the eligibles obtained as a result of these examinations all vacancies now existing or hereafter occurring in medical positions in any branch of the United States Civil Service in New England will be filled. Eligibles are desired at once for the following vacancies:

*Physician, Grade A, Neuro-psychiatry*—

1 vacancy in the U. S. Veterans' Bureau at Boston, Mass.—Salary \$3000 per annum; full-time duty.

4 vacancies in the U. S. Veterans' Hospital at West Roxbury, Mass.—Salary \$1800 per annum and quarters, subsistence, and laundry; full-time duty.

1 or more vacancies in the U. S. Veterans' Hospital at Northampton, Mass.—Salary \$1800 per annum and quarters, subsistence, and laundry; full-time duty.

1 Med. Examiner, Vet. Bu., Hartford, \$3500.

*Physician, Genito-urinary*—

1 vacancy in the U. S. Veterans' Bureau at Boston, Mass.—Salary \$1500 per annum; part-time duty.

*Physician, Orthopedic Surgery and prosthetics*—1 vacancy in the U. S. Veterans' Bureau at New Bedford, Mass.—Salary \$1200 per annum; part-time duty.

*Acting Assistant Surgeon, Roentgenology*—

1 vacancy in the U. S. Public Health Service at New Haven, Conn.—Salary \$3000 per annum; full-time duty.

Applications will be rated as received and certifications will be made as the needs of the service require.

Applicants who are willing to accept the part-time position at the salary indicated should so state in answer to Question 28 of the application.

A full description of the examination is contained on Form 2400. This form and the required application Form 1312 may be secured from the Secretary of the Board of Civil Service Examiners at the post office at any of the places named above, or from the Secretary of the First U. S. Civil Service District, Customhouse Tower, Boston, with whom the application should be filed not later than June 30, 1924.

AMENDMENTS OF FORM 2400:

The paragraph which begins "Applications will not be accepted from any one person" is amended to read as follows: "No applicant may apply for more than one of the above branches of medicine and surgery, except that an applicant may apply in one application for No. 1 General Medicine and Surgery, and one of the specialties."

The paragraph entitled "Grade A" is amended to read as follows: "At least one year of postgraduate full-time experience or special study in or under a recognized institution in the branch for which application is made or under a recognized specialist in that branch. For appointment as acting assistant surgeon in the Public Health Service for assignment to immigration work, the law requires that applicants must have had at least two years' experience in the practice of their profession since graduation. Applications for positions under the Veterans' Bureau for Grade A will be accepted from trainees of

that Bureau who have, as trainees, received the degree of Doctor of Medicine from a recognized medical school but who have not had the required experience. They may be certified only for positions under the Veterans' Bureau where the entrance salary does not exceed \$2400 per annum, and where their work will be performed under supervision."

The paragraph entitled "Medical certificate" is amended to read as follows: "The medical certificate must be executed by a physician in the Federal Service where practicable. Persons selected for appointment may be required to submit to a physical examination by a physician in the Federal Service before actually entering on duty."

*Secretary of the First U. S. Civil Service District.  
Customhouse Tower, Boston 9, Massachusetts.*

#### THE NORFOLK DISTRICT MEDICAL SOCIETY

The Seventy-fourth Annual Meeting of the Norfolk District Medical Society is to be held at Wollaston Golf Club, Wollaston, May 14, 1924.

##### ORDER OF EXERCISES 6.45 P. M.

###### BUSINESS MEETING

1. Minutes of previous meeting
2. Report of Committees
3. Report of Treasurer
4. Election of Officers
5. Incidental Business

###### DINNER 7.15 P. M.

Profiting by last year's experience, the Executive Committee have decided to hold another out doors Annual Meeting.

This year we are fortunate to have the use of the Wollaston Golf Club on Wednesday, May 14, from 2.30 to 10 P. M.

Those who desire to play golf will please communicate with Dr. William C. Emery, 430 Columbia Rd., Dorchester; telephone Dorchester 0069.

As an added attraction, the John Daniels Troupe of Scotch Singers and Entertainers have been engaged for the evening, and will present Cotter's Saturday Night.

This beautiful little musical comedy is adapted from Burns, giving a vivid picture of Scotch Peasant life, and furnishes an excellent vehicle for six fine voices.

The program will be carried out rain or shine, so be sure to come.

There will be an assessment of two dollars and fifty cents.

WILLIAM W. HOWELL, President,  
BRADFORD KENT, Secretary.

Nominating Committee's List of Nominations for 1924-1925.

*President:* Dr. David N. Blakely, Brookline.

*Vice-President:* Dr. John E. Fish, Canton.

*Secretary:* Dr. Frank Cruckshank, Dorchester.

*Treasurer:* Dr. G. W. Kaan, Boston.

*Commissioner of Trials:* Dr. Charles G. Dewey, Dorchester.

*Nominating Councillor:* Dr. D. G. Eldridge, Dorchester; Dr. C. S. Francis (Alternate), Brookline.

*Censors:* Dr. T. J. Murphy, Supervisor, Roxbury; Dr. G. G. Bulfinch, Brookline; Dr. A. A. MacDonald, Dorchester; Dr. W. A. Griffin, Sharon; Dr. H. T. Holland, Jamaica Plain.

*Councillors:* Dr. D. N. Blakely, Brookline; Dr. H. K. Boutwell, Brookline; Dr. Edwin Brigham, Brookline; Dr. W. L. Burrage, Brookline; Dr. P. W. Carr, Hyde Park; Dr. O. R. Chadwell, Jamaica Plain; Dr. Samuel Crowell, Dorchester; Dr. O. G. Daniels, Canton; Dr. C. G. Dewey, Dorchester; Dr. D. G. Eldridge, Dorchester; Dr. C. B. Faunce, Jr., Brookline; Dr. J. E. Fish, Canton; Dr. A. N. Foster, Dorchester; Dr. C. S. Francis, Brookline; Dr. G. H. Francis, Brookline; Dr. Maurice Gerstein, Roxbury; Dr. A. H. Hodgdon, Dedham; Dr. G. W. Kaan, Brookline; Dr. Bradford Kent, Dorchester; Dr. C.

J. Kickham, Brookline; Dr. J. S. H. Leard, West Roxbury; Dr. Edward Martin, Roxbury; Dr. J. S. May, Roxbury; Dr. T. J. Murphy, Roxbury; Dr. M. V. Pierce, Milton; Dr. L. A. Roberts, Dorchester; Dr. Harriet E. Rogers, Norwood; Dr. E. T. Rollins, Jamaica Plain; Dr. Victor Safford, Jamaica Plain; Dr. B. E. Sibley, Brookline; Dr. D. F. Sughrue, Roxbury; Dr. Eugene Thayer, Roxbury; Dr. Lucia F. Vickery, Jamaica Plain; Dr. H. F. R. Watts, Dorchester.

Respectfully Submitted,

F. W. SLEPPER,

*Chairman Nominating Committee.*

#### ESSEX NORTH DISTRICT MEDICAL SOCIETY

Eighty-Third Annual Meeting will be held on invitation of Management and Medical Staff at Lawrence General Hospital, Garden St. corner Prospect St., Lawrence, Wednesday, May 14, 1924. (Tel. 366.)

It is planned to offer the Fellows an opportunity to inspect the entire plant and such clinical material as can be provided, with the following program:

1. Dinner served at 12 sharp in nurses' dining room.

2. Business meeting in same room, and remarks by Enos H. Bigelow, M. D., of Framingham Centre, President of the parent society, upon the Massachusetts Medical Society (10 minutes).

3. From 2 to 4.30, clinics, exhibits and operations will occur in the following departments: Medical, Surgical, Obstetrical, Ophthalmological, Aural, Laryngological, Pediatric, Roentgen-Ray; Orthopedic, Contagious, Out-Patient, Laboratory and Nursing.

Detailed program will be posted on the Hospital bulletin board in main corridor, and announced at meeting.

Automobiles may not enter Hospital grounds on above date, but ample parking space is provided on Prospect and Garden Streets.

There are a few more copies of Dr. Burrage's History of the Mass. Medical Society still unsold.

JOHN J. BARTLEY, M. D., *President.*  
J. FOREST BURNHAM, M. D., *Secretary.*  
567 Haverhill St., Lawrence, Mass., May 6, 1924.

#### CHILDREN'S HOSPITAL-STAFF CLINIC

A Staff Clinic will be held in the Amphitheater on Friday, May 9, 1924, at 4.30 P. M.

All physicians are cordially invited.

#### DOCHEZ AND BLAKE

The readers of the JOURNAL are reminded of the meeting that will take place under the auspices of the New England Pediatric Society at the Boston Medical Library on Friday, May 9, at 8.15, when A. R. Dochez, M. D., of New York, and F. G. Blake, M. D., of New Haven, will tell of their studies on the etiology of scarlet fever and the elaboration of a specific therapeutic serum.

#### DISEASES REPORTED TO MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

Disease	No. of Cases	WEEK ENDING APRIL 26, 1924	Disease	No. of Cases
Chicken pox	162	Pellagra	1	
Diphtheria	162	Pneumonia, lobar	157	
Dog-bite requiring		Scarlet fever	400	
anti-rabic treatment	8	Septic sore throat	3	
Encephalitis lethargica	5	Syphilis	61	
enal meningitis	3	Tetanus	1	
German measles	63	Suppurative conjunctivitis	21	
Gonorrhea	88	Trachoma	1	
Influenza	11	Tuberculosis, pulmonary		
Malaria	2	monary	138	
Measles	976	Tuberculosis, other		
Mumps	380	forms	35	
Ophthalmia neonatorum		Typhoid fever	9	
	9	Whooping cough	75	